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ABSTRACT

This is the first of two monographs reporting the results of a second study of the postcollege careers of 1958 college graduates. A cross-section of persons who received bachelor's and master's degrees in June 1958 were first studied in 1960. A subsample of the 41,497 respondents to the 1960 study were again contacted in 1963 and asked for additional information on their education and work careers. This monograph concentrates on the graduate and professional education of the graduates and attempts to answer such questions as: what accounts for various patterns of study; what is the part played by young people's values and aspirations as against their experiences in graduate school; and how influential are family members when it comes to study decisions? Section I is the introduction. Section II presents tabular and descriptive information on the graduate and professional education of 1958 B.A. recipients, including: (1) enrollment patterns and degrees obtained; (2) study patterns; (3) satisfaction with graduate study fields; (4) financial support through scholarships, fellowships, and other forms of student aid; (5) motivation for graduate study - academic values, undergraduates' grades, and the family and social situations; (6) the nonenrolled and "course takers"; and (7) plans for future study. Section III presents the same information for M.A. recipients. (AF)

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FIVE YEARS AFTER THE COLLEGE DEGREE

PART I

GRADUATE AND PROFESSIONAL EDUCATION

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I. INTRODUCTION

This is the first of two monographs reporting the results of a second study of the postcollege careers of 1958 college graduates.

A cross-section of men and women who obtained academic degrees (bachelor's and master's) in June 1958, were first studied in 1960, two years after they had received the degree.[1] The 1960 study was based on a total of 41,497 responses from men and women who had graduated from American colleges and universities.

A subsample of these respondents were contacted again in late 1963 and asked for additional information on their education and work careers, covering the period 1960-63.[2] Five years after the degree also seemed a good time for a more intensive stock-taking concerning the dynamics of career outcomes. What accounts for various patterns of study and employment? What is the part played by young people's values and aspirations as against their experiences in graduate school and in job situations? How influential are family members--parents as well as spouses--when it comes to study and job decisions?

Thus, the second study in this series on career outcomes of college graduates focuses on many dimensions not covered in the two-year follow-up which was more limited in scope. However, the two studies should be looked at jointly, since many of the important data of the earlier study are only mentioned in passing here.

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[1] See Two Years after the College Degree--work and further study patterns (NSF 63-26). The earlier survey covered recipients of bachelor's, master's, and professional degrees; the last of these groups was omitted from the current study.

[2] The actual sample size was approximately 23,000, and responses were received from 83 per cent of those contacted. For details concerning the methodology of this study, see a separate research memorandum prepared by BSSR.

The findings of the second study are being reported in several monographs, of which the present one--dealing with graduate and professional education--is the first. The second monograph will concentrate on employment and career patterns and will be published later this year. Obviously, employment and further education are not two separate watertight compartments in the professional lives of college graduates; on the contrary they are deeply interrelated. The present division into separate reports was decided upon in order to avoid delays in the publication of data which is of great current interest to policy makers and educators. However, for a better analytical understanding of the dynamics of educational and career decisions and outcomes, the first two reports should of course be considered together.

II. GRADUATE AND PROFESSIONAL EDUCATION OF 1958 B. A. RECIPIENTS[3]

A. Enrollment Patterns and Degrees Obtained

By the end of the summer of 1963 almost 60 per cent of the June 1958 college graduates had attended graduate or professional school for at least one term, although not necessarily in the pursuit of a graduate or professional degree. By this time also, almost one quarter of all the graduates had actually received a graduate or a professional degree, most often a master of arts degree (see Table 1).[4] Only one per cent had earned the Ph. D. (335 men and 18 women).

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[3] This section is based on 25,583 respondents, a number derived through a weighting procedure based on 15,653 actual responses. For detail, see BSSR research memorandum.

[4] The figures in this report underestimate graduate school attendance, due to inconsistencies between the responses to Question 1 of the

TABLE 1

GRADUATE AND PROFESSIONAL SCHOOL ATTENDANCE SINCE 1958

Attendance	Total		Men		Women	
	N	%	N	%	N	%
Total	25583	100.0	16293	100.0	9290	100.0
Never Enrolled	10795	42.2	6406	39.3	4389	47.2
Took Courses Only	6065	23.7	3215	19.7	2850	30.7
Degree Enrolled	8723	34.1	6672	41.0	2051	22.1
Candidate for academic degree	2527	9.9	1747	10.7	780	8.4
Candidate for professional degree	339	1.3	312	1.9	27	0.3
Masters degree recipient and candidate	863	3.4	744	4.6	119	1.3
Masters degree recipient not candidate	3024	11.8	1980	12.2	1044	11.2
Professional degree recipient	1617	6.3	1554	9.5	63	0.7
Ph. D. recipient	353	1.4	335	2.1	18	0.2

Those who have followed educational trends at close range have anticipated for some time the tremendous growth and popularity of graduate study in evidence here. Thus, in its study of the career plans of the class of 1961, the National Opinion Research Center found that over 60 per cent of the college seniors in its study had definite plans for enrolling in graduate or professional school by 1963.[5]

Although it took the 1958 cohort five years rather than two years to reach this level, the correspondence between the behavior of these earlier graduates and the intentions of the more recent cohort is remarkable.

The high interest in graduate study among the present cross-section of 1958 graduates is especially noteworthy when we consider that a large proportion of the graduates are women, who are less likely than men to make graduate study a part of their immediate postcollege lives. Furthermore, the survey includes large blocks of men graduates in fields (business administration and engineering) where at least until recently graduate study was not common. It must be noted that although many women have attended graduate school they were more likely to take courses without being degree candidates; men were more likely to be working toward a degree.

1963 questionnaire and the degrees reported in 1960. Question 1 gave the more conservative estimate and was used as a criterion for purposes of the tabulations in this report. However, the extent of underestimation is probably only a slight one. It should also be noted that those respondents who reported a degree candidacy in 1960 and who did not report a candidacy in 1963 nor a degree received are classed in the "courses only" group and do not appear in the tables limited to the "degree enrolled." Those respondents who studied only for professional certification are also included in the "courses only" group.

[5] James A. Davis, Great Aspirations, Chicago: Aldine Publishing Company, 1964, p. 43.

Comparing the findings of the present survey with the earlier data for 1960, we find that the proportion of graduates enrolled for degrees has increased since the summer of 1960, especially among men college graduates. It is conceivable that some of this delay was the result of time spent in military service.[6] As was shown by the 1960 survey, majoring in one of the following undergraduate fields most often resulted in graduate degree enrollment: premedicine, biological science, philosophy, physics, history, or psychology. Majoring in pharmacy, business administration, or some branches of engineering least often led to graduate enrollment.[7]

During the five year period covered by the study, 28 per cent of the men and 13 per cent of the women had received graduate or professional degrees. In the undergraduate fields (natural science, social science, and humanities and arts) where graduate or professional school enrollment is frequent, graduate degree completion rates are higher than in other undergraduate fields. Appendix Table A1 shows that the highest proportions of degree recipients were found in premedicine (77% of all men who had majored in this field held a graduate or professional degree five years after graduation), followed by philosophy (55% of the men), biological science (56%), philosophy (55%), psychology (46%), chemistry (45%), and history (45%).

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[6] Data on this subject are available from the survey, but were not analyzed for this report and will be included in subsequent reports in this series.

[7] It should be noted that graduate enrollment covered both academic and professional degrees. Some of the undergraduate fields (premedicine, biological sciences, political sciences) are heavily preprofessional (in the above cases, for medicine and law). If academic degrees only (the M. A. and Ph. D.) are considered, differences in the extent to which graduates in various fields engage in graduate study persist, but the clustering of fields is slightly different.

Fewer than 20 per cent of the graduates were degree candidates at the time they completed the 1963 questionnaire. Degree candidates among men (combined here are M. A. and Ph. D. candidates), are highest in physics (38%) followed by foreign languages (31%) "other" physical sciences (26%), education (25%), and psychology (24%).[8]

As shown in Table 2, there is no evidence that over time the enrollment gap between undergraduate fields narrows to a significant extent. The fields which showed the highest degree enrollment by 1960 were still ahead of the others in 1963. But there is some catching up by the "low-enrollment" fields. For instance, in engineering, economics, and education, as many as one-fourth to one-third of the graduate degree seekers wait for several years following graduation from college before becoming degree enrolled. Over-all, however, almost 80 per cent of all degree enrollment occurred within the first two years following college graduation.

As shown in Table 3, the great majority of degree recipients and advanced graduate students had enrolled during the period 1958 to 1960, within the first two years following graduation. Early enrollment was particularly characteristic of the intensive students, those who were Ph. D. candidates (with or without the intermediate Master's degree). There can be little doubt from our findings that graduate students who are committed to their field and potentially successful (in terms of degree completion) start their graduate careers shortly after they obtain their undergraduate degree.

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[8] Possibly, some of the variation here can be attributed to the fact that in some fields, Ph. D. candidates are not required to obtain the intermediate M. A. degree. This may be the reason for the relatively low proportion of physics majors who are degree holders as against degree candidates. (See "Two Years after the College Degree" p. 31.)

TABLE 2

ENROLLMENT FOR GRADUATE AND PROFESSIONAL DEGREES BY UNDERGRADUATE MAJOR AND TIME OF FIRST ENROLLMENT

Undergraduate Major	Total Degree Enrolled for One Term or More 1958-1963		Per Cent First Degree Enrolled During:							
			Men				Women			
	M	W	N	1958-1960	1960-1963	Non-Specified	N	1958-1960	1960-1963	Non-Specified
Total	41.0	22.1	6672	77.9	19.3	2.7	2051	70.2	24.8	4.9
Natural Science	60.0	29.3	1564	86.0	12.7	1.3	235	80.4	16.2	3.4
Biological sciences	69.0	28.9	476	87.1	12.2	.8	93	78.7	17.2	4.3
Premedical fields	83.0	50.0	253	95.7	3.2	1.2	15	100.0	-	-
Chemistry	58.2	25.7	327	88.7	9.8	1.5	40	82.5	12.5	5.0
Earth sciences	36.3	11.8	89	78.6	20.2	1.1	2	100.0	-	-
Physics	62.3	47.1	157	80.9	17.2	1.9	8	87.5	12.5	-
Other physical sciences	52.4	18.5	54	81.4	14.8	3.7	5	80.0	-	20.0
Mathematics	45.9	30.7	208	76.0	22.6	1.4	72	76.4	22.2	1.4
Engineering	30.9	24.4	965	67.9	29.0	3.1	11	63.7	36.4	-
Chemical	45.2	-	116	72.4	25.9	1.7	-	-	-	-
Civil	22.7	-	97	66.0	28.9	5.2	-	-	-	-
Electrical	37.1	-	309	74.4	23.6	1.9	-	-	-	-
Industrial	24.1	-	82	62.2	36.6	1.2	-	-	-	-
Mechanical	27.9	-	232	59.5	35.8	4.7	-	-	-	-
Mining	28.7	-	39	59.0	30.8	10.3	-	-	-	-
Other	29.8	-	90	72.2	26.6	1.1	-	-	-	-
Social Science	52.0	28.0	1595	81.0	16.8	2.2	397	75.6	20.1	4.0
Economics	33.5	22.8	228	73.8	25.0	1.3	19	68.5	21.1	10.5
History	61.0	34.9	450	82.9	16.0	1.1	112	75.0	22.3	1.8

TABLE 2--Continued

Undergraduate Major	Total Degree Enrolled for One Term or More 1958-1963		Per Cent First Degree Enrolled During:							
			Men				Women			
	M	W	N	1958-1960	1960-1963	Non-Specified	N	1958-1960	1960-1963	Non-Specified
Political science	57.4	29.6	250	82.8	13.2	4.0	41	78.0	19.6	2.4
Psychology	61.0	27.4	241	83.7	14.0	2.1	77	70.2	20.8	9.1
Sociology and anthropology	51.6	23.1	136	78.7	16.9	4.4	71	77.5	18.2	4.2
Other social sciences	51.4	26.1	290	81.1	16.9	2.1	77	76.7	22.1	1.3
Humanities and arts	53.3	26.3	929	81.1	15.4	2.8	529	72.6	24.0	3.2
English and journalism	54.0	26.4	396	79.3	18.0	2.8	264	74.9	22.0	3.0
Fine arts	43.6	22.6	220	79.1	17.2	3.6	143	78.4	18.2	3.5
Foreign language	59.2	32.0	80	86.3	11.3	2.5	78	65.3	32.0	2.6
Philosophy	67.1	22.7	147	91.1	8.8	-	7	42.9	57.2	-
Religion	57.3	34.3	86	80.2	13.9	5.8	37	56.7	37.8	5.4
Health	17.5	14.3	53	84.9	13.2	1.9	97	52.6	43.3	4.1
Nursing	-	17.7	-	-	-	-	83	54.2	41.0	4.8
Pharmacy	12.1	-	31	90.4	6.4	3.2	-	-	-	-
Other	50.0	6.8	22	77.2	22.7	-	14	42.8	57.1	-
Agriculture	31.5	-	143	77.0	20.3	2.8	-	-	-	-
Home Economics	-	14.2	-	-	-	-	82	69.5	23.2	7.3
Education	50.0	19.5	807	68.1	28.4	3.5	632	63.7	28.6	7.8
Business and commerce	17.3	12.1	568	72.0	21.8	6.2	58	79.3	20.7	-
General	54.5	22.8	48	72.8	25.0	2.1	10	70.0	30.0	-

TABLE 3

TIME OF FIRST ENROLLMENT FOR DEGREE RECIPIENTS AND DEGREE CANDIDATES

Time of First Enrollment	Total		Per Cent Degree Enrolled					Per Cent			
			Degree Candidate	M. A. Recipient not Candidate	Professional Degree Recipient	M. A. Recipient and Candidate	Ph.D. Recipient	Current[a] Candidates		Degree[b] Recipients	
	N	%						N	%	N	%
Total: Men	6672	100.0	100.0	99.9	100.0	100.0	100.1	2803	99.9	4613	100.0
First enrolled 1958-1960	5201	78.0	52.2	83.6	94.7	90.9	96.2	1751	62.4	4126	89.4
First enrolled 1960-1963	1290	19.3	41.9	14.9	3.5	9.1	2.7	931	33.2	427	9.3
Nonspecified	181	2.7	5.9	1.4	1.8	-	1.2	121	4.3	60	1.3
Total Women:	2051	100.0	100.0	100.0	100.0	100.0	100.0	926	99.9	1244	100.0
First enrolled 1958-1960	1442	70.3	46.0	84.9	92.1	92.4	88.9	481	51.9	1071	86.2
First enrolled 1960-1963	509	24.8	42.6	14.4	6.3	7.6	11.1	353	38.1	165	13.2
Nonspecified	100	4.9	11.4	0.7	1.6	-	-	92	9.9	8	0.6

[a] Current Candidates includes Degree Candidates as well as M. A. Recipients and Candidates.

[b] Degree Recipients includes M. A. Recipients and Not Candidates, Professional Degree Recipients, M. A. Recipients and Candidates. This last group "M. A. Recipients and Candidates" are included in both categories.

In assessing the significance of "early" vs. "late" degree enrollments, it is important to be aware of the complexity of the enrollment picture. As was shown previously, in the 1960 follow-up study, enrollments fluctuate a great deal, and only a minority of graduate students follow a clear path of enrollment for full-time study term after term until they obtain an advanced degree. Shifts between full-time and part-time study, shifts between degree enrollment and nondegree enrollment, dropping studies for a semester or more, are common. Similarly, university regulations confuse the picture (i.e., in some but not in all schools, formal degree candidacy status is granted only after a certain number of graduate courses have been completed). It is also quite possible that respondents may have varied in their interpretation of the questionnaire with respect to "degree enrollment" and graduate student status.

But allowing for all these possibilities, it remains clear that a considerable number of college graduates seem to make relatively late decisions to embark upon graduate study and that the path toward the first graduate degree (usually the M. A.) is in many cases characterized by a late start, interruptions, and slow progress. Looking at these candidates and also at the high numbers of graduates who were enrolled for courses only--some of whom are no doubt potential degree seekers and others who have had considerable exposure to graduate work even if they remain degreeless--we can see the emergence of a sizable "in-between" group: college graduates whose education has gone beyond the bachelor's degree, but who will either not receive a degree at all or will receive it many years later.

B. Study Patterns

Given the length of time required for degree completion and the increasing frequency with which students engage in noncontinuous study--interspersing study periods with travel or work--it is not surprising to find that only approximately half of all the 1958 college graduates who have ever been enrolled for a graduate or professional degree studied continuously, full-time. Slightly over one-third were part-time students only, who combined study and a career or home-making.

Full-time, continuous graduate study is especially characteristic of graduates with the following college majors: biological science, premedicine, chemistry, philosophy, and pharmacy (see Appendix Table A3). It should be noted that included here are some fields where many students seek professional degrees for which a part-time or interrupted study program is usually not authorized. Alternating periods of full-time and part-time study, though relatively uncommon, is engaged in most frequently by graduates in the humanities and arts, and in education. Part-time study patterns are characteristic of enrolled graduates with backgrounds in engineering and education. "Discontinued study" (giving up the effort to obtain a graduate degree or switching from one type of degree to another) is rare but occurs in the greatest proportions among graduates who had majored in industrial engineering and physical science.

For degree enrolled women, the pattern of graduate study is part-time more often than full-time. Only among natural science and health majors was full-time, continuous study a frequent pattern.

Looking at our data from the point of view of the field of graduate study, continuous, full-time study in the graduate fields of health, religion, chemistry, earth science, biological science, chemical engineering, and agriculture, is characteristic of the men enrolled in graduate work. Graduate study in the field of education was part-time or alternate rather than continuous, full-time. Women studied continuously and full-time in chemistry, religion, and the health fields; part-time in education and history (see Appendix Table A4).

Type of degree sought determines to a great extent the study patterns of candidates and degree recipients (see Table 4). As previously noted, future doctors, dentists or lawyers seldom have the option of part-time or stretched-out study. In graduate school, the option is there but the Ph. D. candidates and recipients--because they have a serious commitment, receive financial support, and live in the "full-time study oriented" subculture of the graduate school--also tend to study full-time and continuously, although less regularly than those in professional schools. Those whose terminal goal is the M. A. or a degree in education most often followed discontinuous or part-time study programs.

When asked to select the most important reason for not studying continuously, full-time until receiving a degree, the respondents chose most frequently the "financial reasons" answer. Table 5 suggests that part-time study is most often explained or rationalized in terms of "financial hardship." Part-time students seem to feel that devoting themselves exclusively to their studies would create greater financial difficulties than they are willing or able to tolerate. Interrupted study (dropping graduate study for one term or more) was also reported primarily for financial reasons, but other motives--related to jobs, military service, or family--are also frequently cited by this group. As one might expect, family considerations were an important concern of degree enrolled women and affected their decision to study part-time or "on and off." (See Appendix Tables A5 and A6 for reasons for part-time and alternate study patterns by undergraduate major.)

TABLE 4

PATTERN OF GRADUATE STUDY AND GRADUATE DEGREE SOUGHT

Degree Sought or Received	Total		Per Cent				
	N	%	Full-time[a]	Alternated[b]	Part-time[c]	Discontinued[d]	NA
Total: Men	6672	100.1	50.9	10.2	32.6	4.5	1.9
B. A.	13	100.0	53.8	7.7	38.5	-	-
M. A.	3301	99.9	33.1	14.1	46.4	5.8	0.5
Ph. D.	886	100.0	61.7	8.6	24.6	4.2	0.9
Ed. D.	63	99.9	31.7	11.1	49.2	7.9	-
M. D.	489	100.0	98.0	0.8	0.8	0.4	-
D. V. M.	27	100.0	96.3	3.7	-	-	-
D. D. S.	98	100.0	100.0	-	-	-	-
LL. B., J. D.	611	100.1	83.5	2.3	13.4	0.7	0.2
Divinity degrees	354	99.9	79.9	9.6	7.3	3.1	-
Other	807	100.0	39.8	9.0	33.0	5.8	12.4
No answer	23	100.0	52.2	8.7	39.1	-	-
Total: Women	2051	99.9	31.8	16.4	40.3	8.4	3.0
B. A.	3	*					
M. A.	1635	100.0	30.0	17.2	42.8	8.9	1.1
Ph. D.	96	100.1	49.0	16.7	25.0	9.4	-
Ed. D.	30	100.0	20.0	6.7	66.7	3.3	3.3
M. D.	30	100.0	100.0	-	-	-	-
D. D. S.	-	-	-	-	-	-	-
D. V. M.	1	*					
LL. B., J. D.	18	100.0	72.2	22.2	5.6	-	-
Divinity degrees	12	100.0	66.7	8.3	16.7	-	8.3
Other	225	100.1	24.0	14.2	35.6	7.6	18.7
No answer	1	*					

*Too few cases to compute per cent.

TABLE 4--Continued

[a] Continuous, full-time study,

[b] Alternated between study and nonstudy periods, dropping studies for one semester or more (not counting summer terms) prior to obtaining graduate degree enrolled for,

[c] Completed all or some graduate work as part-time student,

[d] Enrolled for a degree which was not obtained and which respondent is not working on at present. (However, a subsequent degree was received or is being sought.)

TABLE 5

REASON FOR NONCONTINUOUS, NONFULL-TIME GRADUATE STUDY

Degree Enrolled	Total N	Total %	Financial Loss	Scholarship Terminated	Poor Grades	Moved Away	Undecided Field	Military Service	Work Thesis	Time Family	Job Experience	Good Job, No Study	Tired Student	Poor Investment	No Answer
Total: Men[a]	3277	99.9	55.1	1.1	0.7	2.3	1.6	2.7	4.2	2.2	7.7	2.9	3.8	0.5	15.1
Alternated	678	99.8	43.8	2.2	1.3	4.0	3.1	4.3	6.0	3.5	8.8	2.8	5.9	0.1	14.0
Part-time	2174	100.2	63.8	0.8	0.6	1.5	1.0	2.1	3.3	1.7	7.6	2.9	2.2	0.6	12.1
Discontinued[b]	299	99.8	34.1	1.7	1.3	4.7	4.0	4.0	7.7	4.3	8.0	4.0	11.7	1.3	13.0
No answer	126	100.1	16.7	-	-	-	-	1.6	0.8	-	0.8	0.8	0.8	-	78.6
Total: Women[a]	1398	99.8	41.0	0.8	0.6	3.4	1.6	1.0	3.6	14.1	9.2	3.3	3.1	0.1	18.0
Alternated	336	100.0	33.3	1.2	1.2	5.4	-	-	9.5	18.7	8.6	1.5	4.2	0.3	16.1
Part-time	827	99.9	47.6	0.7	0.1	2.4	1.5	1.7	1.7	10.6	11.4	3.5	2.9	-	15.8
Discontinued[b]	173	100.1	32.9	0.6	2.3	5.8	6.4	-	2.3	27.2	3.5	6.4	3.5	-	9.2
No answer	62	100.0	16.1	-	-	-	-	-	-	-	-	1.6	-	-	82.3

[a] Excludes graduates studying continuously, full-time. Men: 3395 Women: 653.

[b] Enrolled for a degree which was not obtained and which respondent is not working on at present. (However, a subsequent degree was received or is being sought.)

TABLE 5--Continued

Your most important reason for not studying continuously, full-time until you received the degree was:

1. Financial (loss of financial support from parents, spouse stopped working, could not afford to study full-time, etc.),

2. Scholarship, fellowship, or grant terminated,

3. Poor grades or progress; could not carry full-time continuous load,

4. Moved away from area where the university I was attending is located,

5. Undecided about field of study,

6. Military service interrupted my studies,

7. All course work completed; working on thesis,

8. Needed more time to devote to my family,

9. Anxious to acquire some job experience,

10. Could get a desirable job without further study,

11. Tired of being a student (or full-time student),

12. Decided it was a poor investment of time and money to seek a graduate degree.

However, while our respondents no doubt expressed the true state of affairs when they reported "financial reasons" as main obstacles to continuous study, academic factors (no doubt related to motivation) are an important part of the total picture. Looking at the graduate's grade point average (GPA) during his undergraduate study period, it was found that the higher the GPA, the more often the enrolled graduate studied full-time. Enrolled students with low GPA's tended to study part-time.[9] Among the low GPA's was also the highest proportion of students who had discontinued their studies (see Table 6). Thus, "financial obstacles" is often synonymous with ineligibility for financial support because of a student's undergraduate record. (This question will be further explored below; see p. 20.)

Most degree enrolled graduates tend to feel that the rate of the completion of their graduate studies is too slow (see Table 7). In particular, current degree candidates feel that they are proceeding too slowly. Degree recipients are more apt to consider the rate of their study completion just right. In general, those who felt that they were progressing too slowly put the blame on finances, stating that they could not afford to study continuously or full-time. Graduates with high GPA's less often blamed financial factors and more often put the blame on their inability to push themselves hard enough--but then high GPA students receive more outside financial aid than the other students (see Table 13, p. 28). These superior students also report faculty pressure, language requirements and thesis requirements as reasons for slowness more often than lower GPA graduates, but generally speaking, these reasons are less often cited by

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[9] See pages 36 and 39 for a more detailed discussion of the methods for standardizing GPA for the various schools in the study.

TABLE 6

PATTERN OF GRADUATE STUDY AND GRADE POINT AVERAGE (GPA)
OF DEGREE ENROLLED GRADUATES

GPA[a]	Degree Enrolled		Full-time	Alternated	Part-time	Discontinued[b]	NA
	N	%					
Total: Men	6672	100.1	50.9	10.2	32.6	4.5	1.9
Low GPA	1635	100.0	37.6	13.9	38.0	8.2	2.3
Medium GPA	1849	100.0	47.4	12.1	34.5	2.9	3.1
High GPA	2360	99.9	60.4	6.9	28.4	3.4	0.8
GPA not available	828	100.0	57.7	7.5	29.5	3.7	1.6
Total: Women	2051	99.9	31.8	16.4	40.3	8.4	3.0
Low GPA	331	100.0	17.2	12.7	53.8	15.1	1.2
Medium GPA	539	100.0	29.5	21.0	39.1	7.4	3.0
High GPA	966	100.1	38.2	16.3	37.1	4.5	4.0
GPA not available	215	100.0	31.6	11.2	37.2	18.6	1.4

[a] For definition of high, medium, and low GPA see pages 36 and 39.

[b] Enrolled for a degree which was not obtained and which respondent is not working on at present. (However, a subsequent degree was received or is being sought.)

TABLE 7

FEELINGS ABOUT RATE OF COMPLETION OF GRADUATE STUDY BY FIELD OF FIRST GRADUATE DEGREE RECEIVED[a]

Field of First Graduate Degree	Men						Women					
	Degree Recipients		Too Fast	Just Right	Too Slow	NA	Degree Recipients		Too Fast	Just Right	Too Slow	NA
	N	%	%	%	%		N	%	%	%	%	%
Total	4600	100.0	3.8	64.2	28.8	3.2	1245	100.1	5.2	71.2	19.7	4.0
Natural Science	558	100.0	1.4	56.8	39.6	2.2	100	100.0	1.0	70.0	29.0	-
Engineering	453	100.0	4.6	61.4	30.7	3.3	-	-	-	-	-	-
Social Science	330	99.9	3.3	53.9	40.0	2.7	104	100.1	4.8	58.7	35.6	1.0
Humanities and Arts	634	100.0	7.6	61.8	26.7	3.9	213	100.0	7.5	62.9	24.4	5.2
Health	677	100.1	2.4	77.1	18.2	2.4	95	100.1	9.5	77.9	9.5	3.2
Business and Commerce	324	100.0	0.9	71.0	23.8	4.3	12	100.0	-	91.7	8.3	-
Education	927	100.1	3.9	56.0	38.0	2.2	560	100.0	4.5	74.1	16.4	5.0
Other	697	100.0	4.6	74.0	16.4	5.0	161	100.0	5.6	75.2	15.5	3.7

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[a] Do you feel that the rate at which you have been, or are, completing graduate study is too fast, just right, or too slow?

students than one might have assumed in the light of earlier studies, in particular Berelson's work.[10] (See Tables 8, 9, and 10.)

C. Satisfaction with Graduate Study Fields

While the enrolled graduates had some doubts about the speed with which they were completing their studies, only 6 per cent were dissatisfied enough with their field of study to change fields while working toward a master's degree or a doctorate (see Table 11).

The most frequent king of change was between fields within the same major area (48% of all field changes as shown in Table 12). Respondents changing from one major area to another did so in the greatest proportions from natural science, social science, and humanities and arts. Education is the field which gains most from these shifts (23% of all changes are into education). Perhaps students who had taken teaching jobs found it necessary or desirable to obtain graduate work in education, or else students decided belatedly to enter the field of teaching as a result of changes in their occupational plans.

D. Financial Support through Scholarships, Fellowships and other Forms of Student Aid

Despite the large amount of aid being spent by public and private sources on graduate student support, most students finance themselves through graduate school. Over-all, fewer than 30 per cent of the degree enrolled graduates reported that during any given year, between 1958 and 1963, they were helped to meet half or more of their annual living and study expenses (see Table 13). The higher the academic degree received, the higher the proportion of students who received partial or full financial support. Furthermore, graduates who had received one graduate degree and were candidates for a second degree received aid in greater proportion than those graduate degree recipients who were not candidates for a second degree (see Table 14). The lesser availability of funds for professional

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[10] Bernard Berelson, Graduate Education in the United States, New York: McGraw-Hill, 1960.

TABLE 8

FEELINGS ABOUT RATE OF GRADUATE STUDY[a]

Degree Enrolled	Total		Per Cent			
	N	%	Too Fast	Just Right	Too Slow	NA
Total Men	6672	100.0	3.1	55.0	39.4	2.5
First Degree Recipients	4600	100.0	3.8	64.2	28.8	3.2
Current Candidates for First Degree	2072	100.0	1.7	34.5	62.9	0.9
Total Women	2051	99.9	3.4	55.4	37.8	3.3
First Degree Recipients	1245	100.0	5.2	71.2	19.7	3.9
Current Candidates for First Degree	806	99.9	0.6	31.1	65.8	2.4

[a] Do you feel that the rate at which you have been, or are, completing graduate study is too fast, just right, or too slow?

TABLE 9M

REASON FOR THINKING COMPLETION OF GRADUATE STUDY "TOO SLOW" BY FIELD OF GRADUATE DEGREE

Field of First Graduate Degree	Degree Recipients[a]		Men								
	N	%	Could not Afford it	Course Difficulty	Faculty Pressure	Inability to Push Oneself	Inconvenient Schedule	Language Requirement	Thesis Requirement	Unaware of Routine	NA
			%	%	%	%	%	%	%	%	%
Total	1327	99.9	50.5	1.8	3.8	14.2	6.5	2.5	4.5	2.9	13.2
Natural Science	221	100.0	35.3	5.0	7.2	22.2	4.1	2.7	8.6	2.7	12.2
Engineering	139	100.1	53.2	2.2	5.8	14.4	8.6	0.7	7.2	2.2	5.8
Social Science	132	100.0	42.4	2.3	9.1	22.0	4.5	3.8	8.3	3.8	3.8
Humanities and Arts	169	100.0	46.2	0.6	3.0	17.8	5.9	4.7	4.1	4.1	13.6
Health	123	100.0	13.8	0.8	3.3	8.1	16.3	0.8	0.8	0.8	55.3
Business and Commerce	77	100.0	62.3	-	-	11.7	1.3	-	9.1	2.6	13.0
Education	352	100.0	76.1	0.3	1.1	8.5	5.4	0.9	0.3	4.0	3.4
Other	114	100.0	44.7	3.5	0.9	10.5	7.9	7.9	3.5	0.9	20.2

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[a] Degree recipients who felt completion of study "too slow."

TABLE 9W

REASON FOR THINKING COMPLETION OF GRADUATE STUDY "TOO SLOW" BY FIELD OF GRADUATE DEGREE

Field of First Graduate Degree	Degree Recipients[a] N	Degree Recipients[a] %	Women: Could not Afford it	Women: Course Difficulty	Women: Faculty Pressure	Women: Inability to Push Oneself	Women: Inconvenient Schedule	Women: Language Requirement	Women: Thesis Requirement	Women: Unaware of Routine	Women: NA
			%	%	%	%	%	%	%	%	%
Total	245	99.8	57.1	5.7	6.9	11.4	4.1	0.4	0.8	2.0	11.4
Natural Science	29	99.8	41.4	6.9	6.9	24.1	3.4	3.4	3.4	6.9	3.4
Social Science	37	100.0	59.5	2.7	2.7	21.6	5.4	-	2.7	-	5.4
Humanities and Arts	52	100.0	46.2	15.4	19.2	7.7	-	-	-	1.9	9.6
Health	9	*									
Business and Commerce	1	*		-							
Education	92	99.9	71.7	3.3	-	4.3	7.6	-	-	-	13.0
Other	25	100.0	60.0	-	-	16.0	-	-	-	8.0	16.0

[a] Degree recipients who felt completion of study "too slow."

*Cases too few to compute per cent.

TABLE 9 --Continued

If you feel that the rate at which you have been, or are, completing graduate study is too slow, where would you put the blame?

1. Could not afford to study full-time or continuously for financial reasons;

2. Found courses too difficult or the professors too demanding;

3. Pressure from faculty to participate in research work or teaching, thereby postponing completion of thesis;

4. Did not push myself hard enough;

5. Courses were not conveniently scheduled or courses not offered when needed for my program;

6. Had difficulty meeting language requirements;

7. Had difficulty meeting thesis requirements;

8. Was not aware of some academic routines or requirements, and lost time on that account.

TABLE 10

REASON FOR THINKING STUDY COMPLETION TOO SLOW BY GRADE POINT AVERAGE (GPA) OF DEGREE ENROLLED GRADUATES

GPA[b]	Degree Enrolled[a]		Could not Afford it	Course Diffi-culty	Faculty Pres-sure	Inabil-ity to Push Oneself	Incon-venient Sched-ule	Lan-guage Require-ment	Thesis Require-ment	Unaware of Routine	NA
	N	%	%	%	%	%	%	%	%	%	%
Total Men	2630	100.2	56.1	2.1	3.3	14.1	5.6	2.0	4.6	2.1	10.3
Low GPA	729	100.1	62.7	1.5	1.9	11.9	4.0	0.3	3.6	2.1	12.1
Medium GPA	752	100.0	62.8	2.4	1.7	13.0	6.1	2.0	3.5	1.5	7.0
High GPA	870	99.9	44.9	2.6	4.7	17.0	6.9	3.3	6.2	3.0	11.3
GPA not available	279	100.0	55.6	0.7	6.5	13.3	3.9	2.5	5.0	1.4	11.1
Total Women	776	100.0	53.4	3.9	3.7	15.1	6.4	0.8	1.9	2.7	12.1
Low GPA	141	100.0	59.6	-	-	17.0	5.7	1.4	1.4	8.5	6.4
Medium GPA	214	99.9	57.0	3.7	3.3	13.6	8.4	0.9	0.9	1.4	10.7
High GPA	329	100.0	45.9	6.7	5.5	13.4	6.1	0.6	3.3	1.2	17.3
GPA not available	92	99.9	62.0	-	4.3	21.7	4.3	-	-	2.2	5.4

[a] Respondents who felt study completion "too slow."

[b] For definition of high, medium, and low GPA see p.

TABLE 11

CHANGE OF STUDY FIELD WHILE WORKING FOR A MASTER'S DEGREE OR THE DOCTORATE

Men and Women	Degree Enrolled		Per Cent			
				While Working		
	N	%	No Change	For Master's Degree	For Doctorate Degree	No Answer
Total	8723	100.0	87.8	5.2	0.8	6.2
Men	6672	100.0	87.4	5.0	0.9	6.7
Women	2051	99.9	89.0	6.0	0.4	4.5

TABLE 12

CHANGE OF FIELD DURING STUDY FOR A MASTER'S DEGREE BY MEN AND WOMEN

Degree Field	Men and Women	Original Field							
		Natural Science	Engineering	Social Science	Humanities and Arts	Health	Business and Commerce	Education	Other	No Answer
	N	N	N	N	N	N	N	N	N	N
Total[a]	457	70	44	79	68	6	12	152	23	3
Natural science	48	23	10	2	-	-	1	10	2	-
Engineering	26	4	21	-	-	-	1	-	-	-
Social science	50	2	1	28	5	-	2	6	6	-
Humanities and arts	44	3	1	7	16	2	0	15	-	-
Health	10	4	1	1	-	2	-	1	1	-
Business and Commerce	27	4	8	3	3	1	7	-	1	-
Education	219	22	1	32	35	1	1	116	10	1
Other	23	6	1	4	7	-	-	2	3	-
No answer	10	2	-	2	2	-	-	2	-	2

[a] This table is composed of the 457 men and women graduates who changed field of study between the time they started working for a master's degree and the time they received it.

TABLE 13

FINANCIAL SUPPORT OF THE DEGREE ENROLLED GRADUATES BY GRADE POINT AVERAGE (GPA)

GPA[c]	Total		Per Cent	
	N	%	Some Support	No Support
Total Men[a]	6672	100.0	27.9	72.1
Low GPA	1635	100.0	18.0	82.0
Medium GPA	1849	100.0	24.8	75.2
High GPA	2360	100.0	36.5	63.5
GPA not available	828	100.0	29.5	70.5
Total Women[b]	2051	100.0	22.4	77.6
Low GPA	331	100.0	8.5	91.5
Medium GPA	539	100.0	20.2	79.8
High GPA	966	100.0	27.2	72.8
GPA not available	215	100.0	27.9	72.1

[a] Excludes never degree enrolled graduates: 9621 Men.

[b] Excludes never degree enrolled graduates: 7239 Women.

[c] For definition of high, medium, and low GPA see pages 36 and 39.

TABLE 14

FINANCIAL SUPPORT BY DEGREE ENROLLMENT

Degree Enrolled	Total Respondents				Men				Women			
	Total N	Total %	All or Some Support %	No Sup-Port %	Total N	Total %	All or Some Support %	No Sup-port %	Total N	Total %	All or Some Support %	No Sup-port %
Total	8723	100.0	26.6	73.4	6672	100.0	27.9	72.1	2051	100.0	22.4	77.6
Ph.D. recipient	353	100.0	77.9	22.1	335	100.0	78.2	21.8	18	100.0	72.2	27.8
M. A. recipient and a candidate	863	100.0	56.7	43.3	744	100.0	58.5	41.5	119	100.0	45.4	54.6
M. A. recipient, not a candidate	3024	100.0	28.6	71.4	1980	100.0	29.2	70.8	1044	100.0	27.5	72.5
Degree candidate	2866	100.0	15.8	84.2	2059	100.0	17.6	82.4	807	100.0	11.3	88.7
Professional degree recipient.	1617	100.0	14.6	85.4	1544	100.0	14.2	85.8	63	100.0	23.8	76.2

degree students as well as the high socioeconomic background of some of these students may account for the relatively small proportion who received financial support.

Our data confirm the widely held impression that graduate students in the natural sciences are a greatly favored group when it comes to financial support. Among those in the natural sciences who had already earned an advanced degree, close to three-fourths of the men and only a slightly lower percentage of women (69%) received partial or full support for at least one year while doing graduate work (within the natural sciences, there was considerable variation, however: chemistry was highest, earth sciences lowest). (See Appendix Table A7.) In engineering too, support ran high, with close to half of all students having received substantial financial help for one year or more. Here too, there was some variation, with greater frequency of support for chemical and mining engineers.

Next to those in the natural sciences, students in the social sciences fared best. Here, 47 per cent of the male students, and 39 per cent of the women received financial help, as defined here. The various social science fields ran surprisingly close; only history (men only) was slightly lower than other fields. In the humanities and arts, on the other hand, the over-all level was much lower; only 31 per cent of the men received this kind of support, with English and especially religion at the bottom of the scale. Strangely enough, women received support more often than men. This may be the result of the high academic caliber of the minority of women in these fields who undertook intensive graduate study right after college. (For details, see Appendix Table A7.)

As shown in Appendix Table A8, students who were still working for a graduate degree reported much less support.[11] Chemistry stands out as the field receiving the greatest proportion of aid.

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[11] This category includes both candidates for first and second graduate degrees. Obviously, this is an amalgamation of the very promising students (those who since graduating in 1958 have obtained an M.A. and are

Although financial problems are cited by these graduates as their greatest problem, it turns out that fewer than 30 per cent applied for funds in any form to assist them in graduate or professional school (see Table 15). This may perhaps be attributed to the students' realistic view of themselves, to their perceived inability to qualify for funds and--in fields other than the natural sciences--to their knowledge of the paucity of resources available. Possibly, there is also some preference for slower study combined with higher income from work. Nevertheless, it is one of the surprising findings of this survey that fewer than 3 per cent of the cohort of 1958 college graduates applied for graduate financial support and were rejected.[12] The "self-screening" mechanism at work here is obviously of a very high order, since the availability of funds is after all limited. Furthermore, Table 15 shows that the rejected applicants more often than not, went on to graduate school in spite of this rejection: the proportion of those rejected is higher among degree candidates or M. A. recipients than among those who never attended school. Those who never went on to graduate school probably never applied at all. Thus, there seems to be little "disbarring" effect resulting from rejection. The most frequent consequence of not receiving funds is no doubt a slow-down of the study process through part-time study, as shown earlier in this report.

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now Ph. D. candidates and other two-degree seekers) as well as those who are still working on their first degree, usually the M. A. However, the dominant group here is the latter; out of 2805 male degree candidates, only 692 were candidates for a second degree, for women, the figures are 101 out of 907. If the "second degree candidates" had been excluded from Appendix Table A6, the support levels shown would undoubtedly be still lower.

[12] The actual incidence of rejection is minimized in Table 15, because of the priority system established in processing the data. Thus, a respondent who experienced several rejections but was successful during any given year and received assistance is only shown as "grant received." The only "rejected" respondents are those who never received any form of assistance. However, given the prevalence of multiple applications for aid, this seemed to us the most rational approach, although it tends to underestimate the impact of rejection in a given year.

TABLE 15

SINCE JUNE 1958, HAVE YOU EVER APPLIED FOR ANY FUNDS IN THE FORM OF GRANTS, LOANS, FELLOWSHIPS, SCHOLARSHIPS, ASSISTANTSHIPS, UNIVERSITY EMPLOYMENT, WAIVED TUITION FEES, ETC. TO ASSIST YOU IN GRADUATE OR PROFESSIONAL SCHOOL?

Grant Experience	Total		Never in School		Some School		Degree Candidate		M. A. Recipient and not a Candidate		Professional Degree Recipient		M. A. Recipient and Candidate		Ph. D. Recipient	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Total Men	16293	99.9	6406	100.0	3215	100.0	2059	100.0	1980	100.0	1554	99.9	744	100.0	335	100.1
Grant accepted[a]		24.6		1.3		18.1		32.8		49.6		51.7		79.8		87.2
Granted, not accepted[b]		1.0		0.9		1.6		0.8		1.5		0.8		1.1		-
Application rejected[c]		3.2		1.1		3.3		6.9		5.8		4.0		2.6		2.4
Did not apply[d]		67.8		94.5		72.7		55.1		38.8		40.2		14.1		6.3
No answer		3.3		2.2		4.3		4.4		4.3		3.2		2.4		4.2
Total Women	9290	100.0	4389	99.9	2850	100.0	807	99.9	1044	100.0	63	100.0	119	99.9	18	100.0
Grant accepted[a]		13.0		0.6		13.6		26.0		43.7		58.7		61.3		77.8
Granted, not accepted [b]		1.1		1.0		1.4		1.1		1.1		-		0.8		-
Application rejected [c]		1.8		0.9		1.8		3.7		3.8		1.6		5.0		5.5
Did not apply [d]		80.6		94.4		80.1		63.9		45.9		38.1		29.4		16.7
No answer		3.5		3.0		3.1		5.2		5.5		1.6		3.4		-

[a] My application was granted and I accepted the funds.

[b] My application was granted, but I did not accept the funds.

[c] My application was rejected.

[d] My application was granted, and I acceptedthe funds.

Table 15 also shows that the proportion of graduates who accepted grants or funds increases with advancing graduate standing. Thus, only a third of the male degree candidates had been given grants as against 87 per cent of those who had obtained the Ph. D. by 1963. The opposite is also evident--only 6 per cent of the male Ph. D. recipients had not applied for grants compared to 55 per cent of the degree candidates.

As one might expect, those undergraduate fields which are comparatively low on graduate enrollment have the greatest proportion of nonapplication for funds to assist in graduate or professional school (see Appendix Table A9). But it is well worth noting that in all fields with the exception of the natural sciences, the majority of undergraduate majors fail to apply for support. Even in the natural sciences and some of the social sciences and humanities where more than half of the graduates become graduate degree seekers or recipients, a large proportion of graduate students do not seek aid. Thus, the previously mentioned self-screening mechanism seems to act as a powerful deterrent even in fields where the availability of funds has received much publicity.

E. Motivation for Graduate Study--Academic Values, Undergraduates' Grades, and the Family and Social Situations

What are the reasons and circumstances which prompted these college graduates to enroll in graduate school? Clearly they are complex, ranging all the way from early career choices, family expectations and peer group influences to academic experiences and influences during the college years and to a graduate's marital decisions, financial situation and geographic location. Some of these factors will be examined below. However, all respondents were also asked a straight forward question on the subject, not because the answers were expected to exhaust the real reasons for graduate study decisions but because the answers were expected to throw some light on differences in the orientation of students in various fields.

The question, and the range of answers, was phrased as follows: What was the most important reason in your decision to study for an advanced degree?

1. Better job and salary opportunities with an advanced degree;

2. Satisfying my academic or intellectual interests;

3. Could not fulfill my career objectives with just an undergraduate degree;

4. It just never occurred to me not to go to graduate or professional school.

The answers with respect to the most important reasons are summarized in Table 16. Over-all, jobs and career related reasons dominated among men although those who had done their undergraduate work in the humanities formed an exception, choosing the "intellectual interest" category more often than their classmates who had majored in the sciences or in engineering. The job-goal orientation on the part of most of these students is in line with the observations of other students of the graduate scene, in particular Berelson.[13] For women a career or job are a less crucial concern, they were more likely to select the academic or intellectual interest answer. It is also interesting to note that in spite of the growing emphasis on graduate work, the point has not yet been reached where a sizable proportion of college graduates take it for granted all along that their education would be incomplete without a higher degree; only a very small proportion of graduates chose as their most important reason for graduate

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[13] Berelson, loc. cit., p. 137.

TABLE 16

MOST IMPORTANT REASON FOR GRADUATE OR PROFESSIONAL SCHOOL ENROLLMENT

Undergraduate Major	Total Degree Enrolled		Per Cent				
	N	%	Better Job[a]	Intellectual Interest[b]	Career Objectives[c]	Never Occurred[d]	NA
Total Men	6672	100.0	33.7	26.0	34.8	2.7	2.8
Natural Science	1564	100.0	25.6	29.8	37.4	4.7	2.5
Engineering	965	99.9	44.2	28.1	24.0	0.9	2.7
Social Science	1595	99.9	29.0	22.6	42.3	2.9	3.1
Humanities and Arts	929	99.9	23.1	32.8	38.4	1.9	3.7
Business and Commerce	568	100.0	44.0	23.6	31.2	1.2	-
Education	807	100.0	49.2	17.5	26.8	2.2	4.3
All other	244	100.1	40.2	24.6	32.0	2.9	0.4
Total Women	2051	100.0	27.0	42.0	24.5	3.7	2.8
Natural Science	235	100.1	21.7	46.4	26.0	4.3	1.7
Engineering	11	100.0	27.3	72.7	-	-	-
Social Science	397	100.0	22.9	37.5	35.5	1.8	2.3
Humanities and Arts	529	100.0	18.3	44.8	30.6	5.5	0.8
Business and Commerce	58	100.1	32.8	41.4	13.8	6.9	5.2
Education	632	100.0	36.2	39.6	15.7	3.8	4.7
All other	189	100.0	33.9	44.4	16.9	1.1	3.7

[a] Better job and salary opportunities with an advanced degree.

[b] Satisfying my academic or intellectual interests.

[c] Could not fulfill my career objectives with just an undergraduate degree.

[d] It just never occurred to me not to go to graduate or professional school.

study answer number four: "It just never occurred to me not to go to graduate or professional school."[14]

But regardless of the graduates' interest and personal motivation for graduate study it is generally taken for granted that a high level of scholastic performance in undergraduate school is a precondition for graduate study, both because of the requirements established by graduate and professional schools and because students who did poorly at the undergraduate level are not likely to seek admission. However, one should bear in mind that just as undergraduate institutions vary tremendously in terms of quality and requirements, graduate and professional schools can also be arranged along a continuum ranging from highly selective institutions to those admitting college graduates regardless of undergraduate achievement. That this is the case is shown by the findings presented in Table 17 where graduate enrollment and progress is compared for students whose grade point average (GPA) in college varies sharply.

The GPA classes on which Tables 17 and 18 are based were derived by a two step method. The actual grade point average for each graduate in the survey was supplied by his or her college. These averages were then adjusted to a common four-point base (with A=4.0, B=3.0, C=2.0). In addition, all colleges were classified in one of four groups, ranging from the highly selective--quality institutions in group I to the most unselective schools

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[14] In line with this observation are the comments of Davis, op. cit., p. 40 where after a painstaking analysis of factors associated with college senior's plans about future graduate school attendance, the author concluded that a major hurdle to earlier and more rational planning for graduate school can be found in the failure of colleges to "sell" students hard enough and early enough on the advantages of graduate study (Great Aspirations, p. 140). Perhaps what is really involved, however, is the fact that for status as well as job reasons, the need for an undergraduate degree is now taken for granted by educators and by "the public at large" while the same belief with respect to a graduate degree is only slowly taking hold; what seems to be more generally accepted is the need for some graduate education, perhaps at a later point in time.

TABLE 17

GRADE POINT AVERAGE AND GRADUATE SCHOOL ATTENDANCE

GPA[a]	Total		Per Cent						
	N	%	Never in School	Some School	Degree Candidate	M. A. Recipient no Candidate	Profes-sional Recipient	M. A. Recipient and Candidate	Ph. D. Recipient
Total Men	16293	100.0	39.3	19.7	12.6	12.2	9.5	4.6	2.1
Low GPA	5977	100.0	49.8	22.9	11.8	8.0	5.6	1.5	0.4
Medium GPA	4605	100.0	39.7	20.2	14.2	13.1	7.9	4.1	0.8
High GPA	3810	100.0	22.5	15.5	13.5	16.4	17.8	8.9	5.4
GPA not available	1901	100.0	39.3	17.1	9.7	14.5	9.1	6.7	3.6
Total Women	9290	100.0	47.2	30.7	8.7	11.2	0.7	1.3	0.2
Low GPA	2012	99.9	54.0	29.6	8.4	7.5	0.2	0.1	0.1
Medium GPA	2829	100.0	44.5	36.5	8.3	9.7	0.3	0.6	0.1
High GPA	3278	100.1	43.4	27.2	9.2	16.1	1.3	2.6	0.3
GPA not available	1171	100.0	53.2	28.4	8.4	7.8	0.6	1.3	0.3

[a] For definition of high, medium and low GPA, see p.

TABLE 18

GRADE POINT AVERAGE AND GRADUATE SCHOOL ATTENDANCE

Graduate School Attendance	Total		Per Cent GPA[a]			
	N	%	Low GPA	Medium GPA	High GPA	GPA Not Available
Total Men	16293	100.1	36.7	28.3	23.4	11.7
Never in school	6404	100.0	46.4	28.5	13.4	11.7
Some school	3215	100.0	42.6	28.9	18.4	10.1
Degree candidate	2059	100.0	34.2	31.9	25.0	8.9
M. A. Recipient and not candidate	1980	100.0	24.2	30.4	31.5	13.9
Professional degree recipient	1554	100.0	21.7	23.5	43.7	11.1
M. A. recipient and candidate	744	100.0	12.2	25.3	45.4	17.1
Ph. D. recipient	335	100.0	6.6	11.6	61.5	20.3
Total Women	9290	100.1	21.7	30.5	35.3	12.6
Never in school	4389	100.0	24.7	28.7	32.4	14.2
Some school	2850	100.0	20.9	36.2	31.2	11.7
Degree candidate	807	99.9	21.1	29.2	37.5	12.1
M. A. recipient and not candidate	1044	100.0	14.5	26.3	50.5	8.7
Professional degree recipient	63	100.0	7.9	14.3	66.7	11.1
M. A. recipient and candidate	119	99.9	2.5	13.4	71.4	12.6
Ph. D. recipient	18	100.0	11.1	16.7	50.0	22.2

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[a] For definition of high, medium, and low GPA see p.

in group IV. Grade point averages were then increased by selected factors to allow for school differences.[15] The following increments were used:

For schools in	Class I	1.0
	Class II	0.7
	Class III	0.3
	Class IV	0.0

For example, a student with a GPA of 2.7 from a Class III institution was classified as having a 3.0 GPA. The three categories in Table 6, p. 18 correspond to the following GPA's:

High	3.2 and over
Medium	2.7 - 3.1
Low	2.6 and below

Thus, the low category includes students who graduated from Class IV institutions with a grade lower than B, from Class III institutions with grades close to C, or from Class I or Class II institutions with grades below C (assuming that in some cases a degree was granted in spite of this low standing). Yet half of the graduates in the lowest category undertook further studies. The women most often took only additional course work, but over 25 per cent of the men sought or received advanced degrees. As one might expect, most often they were involved in M. A. programs only; at the professional and Ph. D. levels the proportion of those with a low GPA was quite small.

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[15] The method used here follows the same general lines as the construction of the API (Academic Performance Index) developed by NORC in their study of the class of 1961 (see Great Aspirations pp. 27-29). The classification of schools into four classes was based on a combination of criteria involving test scores of undergraduates on the National Merit Scholarship test, library expenditures, the presence of a Phi Beta Kappa chapter, etc. Since our survey included students from many institutions not covered in the NORC study, we sought and received some additional data from the National Merit Scholarship Corporation, which is hereby gratefully acknowledged.

As might be expected, the high GPA group (which is actually far from being a selective or "elite" category, since it includes B+ students from unselective institutions as well as C+ students from the highly selective colleges and universities) was higher in professional degree recipients and Ph. D. candidates. Most striking in Table 18 is the difference in graduate study participation in the high GPA group between men and women. Sixty-five per cent of the women were not enrolled for any kind of graduate or professional degree. The comparable percentage for high GPA men is just half (32%).

It is conceivable that graduate enrollment on the part of poor students and nonenrollment on the part of good students might be due to misperceptions about academic standing. To check on this possibility the survey included the following question:

Thinking back to your undergraduate courses, would you consider the grades you received:

Well above average; ____
Somewhat above average; ____
About average; ____
Somewhat below average; ____
Well below average. ____

As Table 19 shows, on the whole, the graduates accurately estimated their college grades. Inaccuracies tended to be underestimation, rather than overestimation of grades. (But it should be remembered that the GPA has been adjusted for "school quality" and that some graduates in the high GPA group may have had only "average" grades at a highly selective institution.) However, it seems that concern about academic performance or ability is one of the less significant factors when it comes to graduate enrollment decisions (although it does affect application for funds).

TABLE 19

GRADE POINT AVERAGE AND PERCEPTION OF UNDERGRADUATE COURSE GRADES RECEIVED

GPA[b]	Total		Per Cent Perceived Undergraduate Grades[a]			
	N	%	GPA Low	GPA Medium	GPA High	GPA No Answer
Total Men	16293	100.0	40.9	37.2	18.4	3.5
Low GPA	5977	99.9	68.7	25.2	2.2	3.8
Medium GPA	4605	99.9	30.9	54.8	10.8	3.4
High GPA	3810	100.1	10.2	35.6	51.6	2.7
GPA not available	1901	100.0	39.5	35.0	21.6	3.9
Total Women	9290	99.9	32.4	40.3	23.1	4.1
Low GPA	2012	99.9	66.8	25.4	2.6	5.1
Medium GPA	2829	99.9	32.8	54.2	9.6	3.3
High GPA	3278	100.0	10.5	38.3	47.1	4.1
GPA not available	1171	100.0	33.6	37.7	24.0	4.7

[a] These categories correspond to the following handling of actual answers to the question: "Thinking back to your undergraduate courses how would you consider the grades you received?" Answers were classified as follows: well above average was classified high; somewhat above average was classified medium, and average, somewhat below average, and well below average were classified low.

[b] For definition of high, medium, and low GPA see pages 36 and 39.

That women are less likely to enroll than men is by now well documented through the various national follow-up studies, as well as studies conducted by some women's colleges and coeducational schools. That this is true of able and high-achieving women as well has been suspected although not extensively documented until the recent spate of studies came along. The present survey confirms what the NORC Great Aspirations survey (based on student intentions) had led one to expect: women generally get better grades than men (in our sample 35% of the women, as against 23% of the men were in the high GPA group), but in spite of their unquestioned ability to do so, they are much less likely to engage in post college study. It is also true that a five year span is insufficient time to evaluate the long-term picture. Although it is now advocated that women should be encouraged and helped financially to combine professional careers with marriage, the emphasis is primarily on the post-childrearing period. Thus, it is conceivable that a fair number of these 1958 graduates will enter graduate or professional school by 1973 or even later. Possibly the recent emphasis on graduate study for women as well as the improvement in the total opportunity structure as it affects graduate study for women (greater academic flexibility, the availability of more financial assistance, and high earnings for young college graduates in almost all fields) are already reflected in these findings and still further growth in enrollment may be expected for the future.

It was clear from the 1960 survey that women's low participation in graduate study was related to motherhood. The presence of children made study not only less likely for the mothers, but for fathers as well. Now, five years after college, the picture is becoming even clearer. As shown in Table 20, close to 17 per cent of the men and close to 20 per cent of the women who received a bachelor's degree in 1958 are still single.

TABLE 20

MARITAL STATUS OF 1958 B. A. RECIPIENTS IN 1960 AND 1963

Marital Status	Men				Women			
	1960		1963		1960		1963	
	N	%	N	%	N	%	N	%
Total	20399	100.0	16293	100.0	11723	100.0	9290	100.0
Never married	7373	36.1	2706	16.6	4511	38.5	1836	19.8
Married	12650	62.1	13129	80.6	6835	58.3	6966	75.0
No children	4407	21.6	2477	15.2	3453	29.5	1474	15.9
Children	8243	40.5	10652	65.4	3382	28.8	5492	59.1
Widowed, separated, divorced	149	0.7	191	1.2	271	2.3	290	3.1
No answer	227	1.1	267	1.6	106	0.9	198	2.1

(Incidentally, this is a surprisingly high proportion. According to 1963 population estimates the proportion of single women in the age-group 25 to 29 was 9.7; thus it was twice as high among the graduates in our survey whose median age in 1963 was 27.6 years.) Of those married, the great majority have children, and for the women graduates the first child was most likely born between 1960 and 1963 (in 1960, only 29% of the female graduates were in the "married with children" group; by 1963, the percentage had increased to 59).

For women, graduate school enrollment and especially the pursuit of a degree is crucially influenced by the presence or absence of small children. Having children inhibits graduate degree enrollment although apparently it does not prevent the taking of courses to the same extent. The presence of children apparently has very little influence on degree enrollment for men (see Table 21). Married men--especially those who have children--tend to be enrolled somewhat less often than unmarried men, but the differences are not great, and it is probably date of birth of first child, rather than marriage per se, which is most crucial. Some additional light is shed on this question from an examination of the data for the master's group (see p. 101).

While it is clear that marital status--the presence of a spouse and especially of children--is of crucial importance in the matter of graduate study, our data show that over and beyond this, the spouse's values--his or her feelings about the desirability of graduate or professional education--also play an important part. The following questions were asked:

> How important does your spouse think it is for you to study for an advanced degree?
>
> How important do your parents think it is for you to study for an advanced degree?

TABLE 21M

MARITAL STATUS AND GRADUATE SCHOOL ATTENDANCE

Marital Status Year of Marriage	Total N	Total %	Never in School	Some School	Degree Candidate	M. A. Recipient and not a Candidate	Professional Degree Recipient	M. A. Recipient and Candidate	Ph. D. Recipient
Total Men	16293	100.0	39.3	19.7	12.6	12.2	9.5	4.6	2.1
Never married	2706	100.0	29.7	19.8	14.3	15.3	11.9	6.9	2.1
Married, no children	2477	99.9	30.8	19.3	14.7	12.4	12.9	6.9	2.9
1935-1953	71	100.0	59.2	21.1	4.2	8.5	1.4	4.2	1.4
1954-1957	142	99.9	40.1	19.7	7.7	11.3	9.2	7.7	4.2
1958	211	100.0	42.2	14.7	11.4	11.8	7.1	6.2	6.6
1959-1964	944	100.0	29.6	18.7	14.2	11.4	15.9	8.1	2.1
No answer	1109	100.0	26.8	20.4	17.3	13.8	12.6	6.2	2.9
Married, children	10652	100.0	44.0	19.5	11.8	11.2	8.1	3.5	1.9
1935-1953	1341	100.0	50.2	19.5	12.5	11.3	2.8	3.1	0.6
1954-1957	2519	100.0	44.9	21.1	12.1	9.8	7.0	3.0	2.1
1958	1724	100.0	45.1	17.7	12.2	11.3	7.9	3.5	2.3
1959-1964	2480	100.0	40.6	16.4	12.8	11.5	12.1	4.3	2.3
No answer	2588	99.9	42.4	22.3	9.8	12.2	8.2	3.5	1.5

TABLE 21M--Continued

Marital Status Year of Marriage	Total N	Total %	Never in School	Some School	Degree Candidate	M. A. Recipient and not a Candidate	Professional Degree Recipient	M. A. Recipient and Candidate	Ph. D. Recipient
Widowed, Separated, Divorced	191	100.0	26.2	25.1	17.8	15.7	11.0	3.7	0.5
1935-1953	28	100.1	28.6	14.3	42.9	10.7	3.6	-	-
1954-1957	51	99.9	29.4	29.4	17.6	13.7	5.9	3.9	-
1958	35	100.2	14.3	48.6	14.3	8.6	2.9	8.6	2.9
1959-1964	60	100.0	28.3	16.7	11.7	20.0	20.0	3.3	-
No answer	17	100.0	29.4	11.8	5.9	29.4	23.5	-	-
No Answer	267	100.1	39.0	27.0	8.2	12.7	9.4	1.9	1.9

TABLE 21V

MARITAL STATUS AND GRADUATE SCHOOL ATTENDANCE

Marital Status Year of Marriage	Total N	Total %	Never in School	Some School	Degree Candidate	M. A. Recipient and not a Candidate	Professional Degree Recipient	M. A. Recipient and Candidate	Ph. D. Recipient
Total Women	9290	100.0	47.2	30.7	8.7	11.2	0.7	1.3	0.2
Never married	1836	100.1	22.8	36.7	14.1	21.5	1.6	3.0	0.4
Married, no children	1474	99.9	37.0	34.3	11.1	15.3	0.5	1.2	0.5
1935-1953	35	99.9	37.1	37.1	11.4	11.4	-	2.9	-
1954-1957	91	100.1	26.4	29.7	24.2	17.6	1.1	-	1.1
1958	155	99.9	40.6	36.1	10.3	12.3	-	-	0.6
1959-1964	652	100.0	42.0	32.4	8.0	14.7	0.9	1.4	0.6
No answer	541	100.0	31.8	36.8	12.9	16.8	0.2	1.3	0.2
Married, children	5492	100.1	58.5	27.7	5.7	7.0	0.4	0.7	0.1
1935-1953	550	99.9	30.7	35.6	18.5	12.7	0.2	2.2	-
1954-1957	686	99.9	75.4	16.6	2.3	5.2	-	0.4	-
1958	1351	99.9	67.9	22.6	4.9	3.9	0.3	0.3	-
1959-1964	1581	100.0	54.7	30.4	5.7	8.1	0.5	0.4	0.2
No answer	1324	100.0	56.1	32.0	2.9	7.5	0.6	0.8	0.1

TABLE 21W--Continued

Marital Status Year of Marriage	Total N	Total %	Never in School	Some School	Degree Candidate	M. A. Recipient and not a Candidate	Professional Degree Recipient	M. A. Recipient and Candidate	Ph. D. Recipient
Widowed, Separated Divorced	290	100.0	27.9	39.0	17.2	12.1	1.7	2.1	-
1935-1953	151	99.9	27.8	33.1	22.5	15.2	-	1.3	-
1954-1957	42	100.0	31.0	47.6	7.1	9.5	-	4.8	-
1958	17	100.0	41.2	29.4	17.6	5.9	5.9	-	-
1959-1964	50	100.0	30.0	34.0	14.0	12.0	8.0	2.0	-
No answer	30	99.9	13.3	70.0	10.0	3.3	-	3.3	-
No Answer	198	100.0	66.2	18.7	11.6	1.5	-	2.0	-

Tables 22 and 23 show that when parents or spouses thought advanced degree study "very important," the proportion of students enrolled was higher than in situations where parents and spouses did not feel advanced degree study to be important. It is of course difficult to say whether parents' and spouses' feelings bring about degree enrollment or whether degree enrollment bolsters one's feelings about support from parents or spouses. Furthermore, it is likely that many of those who are oriented toward graduate study had indeed been reared in "education prone" families and married similarly oriented spouses. Still, whatever the dynamics are, our findings suggest that perception of parental or marital support for advanced degree study may be important in the enrollment decision.

From this point of view, it is particularly intriguing to compare the data for men and women in Table 22. According to the husbands' perception, only 25 per cent of all wives felt that graduate study was not important for their husbands; over one-third felt that graduate education was very important. In comparison, according to the wives' perception, only 16 per cent of the husbands feel that graduate education for their wives is "very important," 49 per cent felt it was not important.

Husbands receive increasing moral support from their wives according to level of degree candidacy or attainment. Although the same general pattern held true for wives who were degree candidates or recipients, they reported a considerably lower level of positive support from husbands.

Parents appeared to exhibit similar emotions concerning graduate education for their children as did husbands and wives for each other. However, although parents felt that graduate education was more important for sons than for daughters, the differences were not as great as the differences between spouses (see Table 23).

TABLE 22

HOW IMPORTANT DOES YOUR SPOUSE THINK IT IS FOR YOU TO STUDY FOR A GRADUATE DEGREE?

Graduate School Attendance	Total		How Important?		
	N	%	Very	Somewhat	Not Important
			%	%	%
Total Men[a]	12884	100.0	37.2	37.7	25.1
Never in school	5356	100.0	15.9	40.0	44.1
Some school	2521	100.1	35.7	42.1	22.3
Degree candidate	1606	100.0	62.5	34.1	3.4
M. A. recipient and not candidate	1455	100.0	52.2	38.6	9.2
Professional degree recipient	1153	100.0	61.1	29.9	9.0
M. A. recipient and candidate	536	100.0	71.5	25.9	2.6
Ph. D. recipient	257	100.1	72.8	25.7	1.6
Total Women[b]	6803	100.1	15.7	36.6	47.8
Never in school	3693	100.0	8.4	34.3	57.3
Some school	1979	99.9	14.1	40.6	45.2
Degree candidate	466	100.1	46.4	37.6	16.1
M. A. recipient and not candidate	569	100.0	38.0	35.5	26.5
Professional degree recipient	28	99.9	50.0	35.7	14.2
M. A. recipient and candidate	58	100.0	46.5	41.4	12.1
Ph. D. recipient	10	100.0	30.0	60.0	10.0

[a] Excludes 2655 unmarried male graduates and 753 no answers.

[b] Excludes 1753 unmarried female graduates and 734 no answers.

TABLE 23

HOW IMPORTANT DO YOUR PARENTS THINK IT IS FOR YOU TO STUDY FOR AN ADVANCED DEGREE?

Graduate School Attendance	Total		How Important?		
	N	%	Very %	Somewhat %	Not Important %
Total Men [a]	13356	100.0	27.4	39.0	33.6
Never in school	5115	100.0	9.9	32.3	57.8
Some school	2497	100.0	24.4	45.0	30.6
Degree candidate	1729	100.0	43.6	46.3	10.1
M. A. recipient and not candidate	1673	100.0	36.9	46.6	16.5
Professional degree recipient	1384	100.0	53.1	32.3	14.6
M. A. recipient and candidate	647	99.9	45.1	44.3	10.5
Ph. D. recipient	311	100.0	49.5	37.0	13.5
Total Women [b]	7454	100.0	17.4	34.1	48.5
Never in school	3536	100.0	9.1	28.5	62.4
Some school	2233	100.0	15.8	37.0	47.2
Degree candidate	652	100.0	40.2	41.4	18.4
M. A. recipient and not candidate	868	99.9	34.4	42.5	23.0
Professional degree recipient	55	99.9	34.5	34.5	30.9
M. A. recipient and candidate	95	99.9	36.8	49.4	13.7
Ph. D. recipient	15	100.0	40.0	40.0	20.0

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[a] Excludes 2272 not applicable (parents deceased, etc.) and 665 no answers.

[b] Excludes 1274 not applicable (parents deceased, etc.) and 562 no answers.

Having friends who went to graduate or professional school also correlates closely with graduate enrollment (see Table 24). In general, the more graduate-school going friends the respondent had, the more likely he or she was to go on. Conversely, those who had none or few friends who went to graduate school rarely went themselves. Only 23 per cent of the men graduates who had none or few friends went on, compared to 60 per cent of those who had many such friends.

These data leave little doubt about the prevalence of strong reinforcing influences--from parents, marriage partners, and friends--in the realm of graduate study decision making. What we do not know, of course, and could only learn through the use of more intensive study devices, is the extent to which parental interest is the early, dominant influence, which in turn affects the selection of friends and marriage partners. Other research on graduate study motivation suggests that institutions and peer-group influences in the undergraduate environment are much stronger determinants of graduate study decisions than parental influences. Actually, what seems to be the case--judging from the present data and from the information in the Great Aspirations study--is that everyone is in favor of some graduate study--at least for men--and that the graduate school-goer finds plenty of psychological support in his environment, to some extent regardless of his academic standing. It is therefore perhaps more profitable to look at the students who never attended graduate school and who seem to be rapidly becoming the atypical case among college graduates.

F. The Nonenrolled: Nonapplicants and Course Takers

Only about one-third of the graduates in our study had had no graduate or professional school contact since they left college in 1958.

TABLE 24

GRADUATE SCHOOL GOING FRIENDS AND GRADUATE SCHOOL ATTENDANCE

Graduate School Going Friends	Total		Per Cent						
	N	%	Never in School	Some School	Degree Candidate	M. A. Recipient and not a Candidate	Professional Degree Recipient	M. A. Recipient and Candidate	Ph. D. Recipient
Total Men	16293	100.0	39.3	19.7	12.6	12.2	9.5	4.6	2.1
Many	5094	100.0	19.8	19.8	16.0	15.9	17.4	7.8	3.3
Some	8231	100.0	44.5	20.9	12.5	11.0	6.4	3.3	1.4
None or few	2425	100.1	61.9	15.3	7.0	7.5	4.2	2.5	1.7
No answer	543	100.0	42.9	21.7	8.3	14.4	8.1	2.6	2.0
Total Women	9290	100.0	47.2	30.7	8.7	11.2	0.7	1.3	0.2
Many	2321	100.0	36.3	34.7	10.8	13.7	1.6	2.6	0.3
Some	4926	100.0	50.2	29.5	8.0	11.0	0.3	0.8	0.2
None or few	1655	100.2	55.1	26.2	7.6	9.7	0.4	1.1	0.1
No answer	387	100.2	42.1	40.3	9.8	6.7	0.5	0.5	0.3

The men more often than the women sought degrees or took courses; it is among women that about half of the graduates terminated their contact with higher education at the time they received the bachelor's degree--at least for the five-year period under study.

The process of self-screening--which seems to have operated so strongly with respect to application for support, is also highly developed when it comes to applying for admission to graduate school; nonenrollment is seldom the result of rejection. Close to 60 per cent of the men graduates who had never been degree enrolled had never sought admission to graduate school either as degree students or to take courses. The reported rejection rate for men was extremely low (2%).[16] Male graduates in the following undergraduate fields had slightly higher rejection rates: chemistry (6%), sociology and anthropology (5%), and foreign language (6%). Among the women, the over-all rejection rate was even lower (0.7%). The number of rejections seemed comparatively very high for premedicine majors, although the total number of cases is too small to draw a firm conclusion (see Appendix Table A2). We have not carried the analysis of our data far enough to come up with a clear picture of the mechanisms which operate in this self-screening process. No doubt in addition to sex and field, academic performance at the undergraduate level is a crucial factor: men and women who do not seek degrees more often had a lower grade point average than degree seekers.

It is more difficult at this point to arrive at a satisfactory description of the "courses only" group. The proportion of "courses only" ran higher than average for men who had majored in education, fine arts, some of the natural sciences (physics, mathematics) and engineering. With respect to motivation for graduate study--as measured by parents', spouses', and friends' attitudes--the "courses only" group seemed closer to the degree-enrolled than to the "never-enrolled" group (see Tables 22, 23, and 24; pages 50, 51, and 53). With respect to grade-point average, however, this group resembled the "never-enrolled." One might hypothesize that--apart from those who took courses to acquire specific job skills or satisfy job requirements--the "courses only" group includes graduates who find themselves under cross-pressures between the expectations of their families and friends and the difficulties they had experienced in their academic work (see Tables 8, 9, and 10; pages 21 through 25). They cope with these cross-pressures--at least temporarily--by attending graduate school without involving themselves in academically taxing degree programs.

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[16] Here again, our processing procedures did not distinguish between those who experienced rejection and made several applications before being accepted, and those who were never rejected at all. It is well known that at many prestige graduate schools, the rejection rate is very high. But in this area too, the prevalence of multiple application made it seem advisable to limit the "rejected" group to those who were never accepted.

For both groups--nonapplicants and course-takers--"financial obstacles" are of course in the picture, but perhaps less prominently so than is sometimes assumed. In answer to a question on reasons for not enrolling, job-related responses ("found a job that did not require further study" and "anxious to acquire job experience") were just as often given. However, it is interesting to note in Table 25 that financial obstacles were more significant for those students who came closer to degree enrollment (those who took course, or who applied but then failed to enroll) than for those who never applied. This area deserves more intensive study. In particular we need to look more closely at the nonenrolled in the "high GPA" group. Of all the nonenrolled, 15 per cent are in this category--a far from negligible proportion, whose reasons for nonenrollment should be further investigated.

TABLE 25M

MOST IMPORTANT REASON IN DECISION NOT TO SEEK A GRADUATE DEGREE

Never Degree Enrolled In Graduate School	Total Men N	Total Men %	Financial obstacles %	No university near residence %	Grades not good enough %	Found job not requiring further study %	Graduate degree unnecessary for job %	Local university poor %	Anxious to acquire job by experience %	Tired of being a student %	Wanted time for family %	Undecided about field of study %	Consider myself too old %	No answer %
Total Men	9621	100.1	15.9	5.7	2.2	12.1	6.4	1.1	13.1	6.0	6.6	6.4	0.4	24.2
Never sought admission	5729	99.9	17.6	7.3	2.4	17.6	6.6	1.0	17.8	7.6	8.4	6.8	0.6	6.2
Sought admission for courses only	1105	100.1	23.3	6.6	5.5	7.0	11.0	2.5	11.5	4.9	8.0	12.3	0.2	7.3
Accepted as degree student, failed to enroll	398	100.0	34.9	10.3	0.5	9.8	3.3	1.0	12.1	7.5	4.3	9.3	-	7.0
Accepted as degree student, enrolled for courses only	413	100.0	21.1	2.4	1.7	6.5	21.1	1.5	14.5	6.8	9.2	8.0	0.2	7.0
Application rejected for degree-enrollment	209	100.0	1.4	-	1.9	-	-	0.5	0.5	9.6	-	-	-	86.1
No answer	1767	100.1	2.2	0.5	0.1	0.6	1.0	0.2	0.6	0.3	0.4	0.8	-	93.4

TABLE 25W

MOST IMPORTANT REASON IN DECISION NOT TO SEEK A GRADUATE DEGREE

Never Degree Enrolled In Graduate School	Total Women N	Total Women %	Financial obstacles	No university near residence	Grades not good enough	Found job not requiring further study	Graduate degree unnecessary for job	Local university poor	Anxious to acquire job by experience	Tired of being a student	Wanted time for family	Undecided about field of study	Consider myself too old	No answer
			%	%	%	%	%	%	%	%	%	%	%	%
Total Women	7239	100.0	9.5	4.3	0.5	7.7	7.0	1.4	7.5	4.7	30.1	6.5	1.3	19.5
Never sought admission	4160	100.2	9.1	5.1	0.4	11.9	4.7	1.5	9.5	5.4	41.7	5.1	1.1	4.7
Sought admission for courses only	1216	99.9	15.0	4.2	1.2	3.0	15.6	1.2	7.5	5.2	24.8	14.6	2.2	5.4
Accepted as degree student, failed to enroll	215	99.9	27.4	13.5	-	3.3	0.5	3.7	7.4	3.7	15.3	9.3	-	15.8
Accepted as degree student, enrolled for courses only	399	100.0	14.0	4.8	-	2.0	25.1	2.5	8.3	4.5	19.5	13.0	2.0	4.3
Application rejected for degree-enrollment	52	99.9	1.9	-	-	1.9	-	-	-	-	-	-	1.9	94.2
No answer	1197	100.0	1.1	0.3	0.8	0.8	1.8	0.4	0.6	2.0	2.9	0.5	1.0	87.8

TABLE 25--Continued

Alternative reasons for not seeking a degree:

1. Financial obstacles,
2. No university near my place of residence,
3. Undergraduate grades not good enough,
4. Found a job that did not required further study,
5. Additional study, but no graduate degree, needed to meet job requirements,
6. Not satisfied with caliber of local university,
7. Anxious to acquire job experience,
8. Tired of being a student,
9. Did not want to take time from being with my family,
10. Undecided about field of study,
11. Considered myself too old.

G. Plans for Future Studies

Although five years have elapsed since the men and women in the cohort under study obtained an undergraduate degree, quite a few of them expect to be involved in graduate study for many years to come. One-third of all the graduates expect to begin work on one or more advanced academic or professional degrees in the future. This proportion is all the more outstanding when one considers that 15 per cent are current degree candidates, and that 23 per cent have already received at least one advanced degree. Even allowing for overlap between these groups, these data indicate that we can expect considerable increments in graduate enrollments after a relatively long nonenrollment period. This expectation is further reinforced by an examination of study plans by major field of undergraduate study (see Appendix Table A10). Respondents in the undergraduate fields which exhibited high previous or current degree enrollment, in particular the natural sciences, showed relatively little expectation of beginning future degree work. Similarly, respondents in the health fields, business and commerce, and engineering, which are low on degree enrollment exhibit only slight expectation to begin graduate work in the future. Expectations of future graduate degree work are highest in the "in-between groups": fine arts, religion, education, English and journalism, with the bulk of future graduate work planned in the field of education. Over half of this graduate work is to be started by women. This indicates a continuation of the past trend for late degree initiation and completion in this field, as shown in Table 26.

Fifty-nine per cent of the men and 39 per cent of the women who expect to study for a graduate degree intend to begin study within the next two years (1964 and 1965). Few men expect to start future study after

TABLE 26

EXPECTED GRADUATE FIELD AND EXPECTED YEAR OF GRADUATE ENROLLMENT

Expected Graduate Field	Year											
	Total		Per Cent Men				Total		Per Cent Women			
	N	%	1964-1965	1966-1969	1970 and Later	NA	N	%	1964-1965	1966-1969	1970 and Later	NA
Total	4914	100.0	59.2	9.3	1.1	30.4	3077	100.0	39.2	14.2	8.9	37.7
Natural Science	505	100.0	65.5	9.9	0.6	24.0	174	100.0	41.4	13.8	8.6	36.2
Engineering	626	100.0	66.9	11.1	0.6	21.4	2	*	.	-		
Social Science	510	100.0	62.1	7.7	0.8	29.4	290	100.0	46.9	10.3	10.7	32.1
Humanities and Arts	532	100.0	47.9	14.5	4.3	33.3	452	100.1	34.1	13.5	11.1	41.4
Health	105	100.1	60.9	16.3	2.9	20.0	159	100.0	28.9	14.5	11.3	45.3
Agriculture	69	99.9	37.7	18.8	1.4	42.0	-	-	-	-	-	-
Home Economics	-	-	-	-	-	-	110	99.9	33.6	18.2	3.6	44.5
Business and Commerce	673	100.0	72.4	5.0	0.6	22.0	-	-	-	-	-	-
Education	1050	100.0	62.4	8.9	0.6	28.1	1413	100.1	43.2	16.9	9.6	30.4
Other Field	353	100.0	59.5	8.5	1.1	30.9	244	100.0	43.9	13.9	4.9	37.3
Field Unknown	491	100.0	29.8	6.1	0.6	63.5	233	99.9	18.0	3.4	3.4	75.1

*Too few cases to compute per cent.

1965 while women have plans for study starts through 1972. This is indicative of the life situations of these graduates. The men are facing the necessity of building careers within a certain time period. The women need to postpone their plans, yet they clearly have definite career aspirations for later life.

In line with these differences in study plans are the expectations for degree completion. Fifty per cent of the men graduates, who intend to begin graduate study in the future, expect to obtain their degree by 1968. Women, in general, expect to take longer to obtain a degree, ten years compared to five for men.

All of these predictions and expectations are of course, merely indicators of interest, rather than accurate predictors. Nevertheless, it is likely that over time, as many as 20 or 25 per cent of these graduates will obtain a degree for which they were not enrolled five years after graduation. The bulk of these degrees is likely to be in the field of education, and to a lesser extent, the humanities. There seems to be relatively little likelihood that large numbers of degrees will be granted in the sciences (natural and social) for which enrollment did not take place within the first 5 years following receipt of the bachelor's degree. The latter finding is especially significant in relation to women. We have seen that there is relatively little nonenrollment among high GPA men and among those who majored in the sciences and although we have not refined our analysis to the point where we can document this statement, we feel that it is probably safe to conjecture that most men who were science majors and performed well at the undergraduate level go on to graduate study in their field or a closely related one. Most able women, on the other hand, do not go on, at least not immediately, and when they do so at a later stage in their life, it is likely to be in the field of education, rather than in the scientific field in which they started out as undergraduates.

III. FURTHER STUDY PATTERNS OF 1958 MASTER'S DEGREE RECIPIENTS

A. Enrollment Patterns

The present study included a total of 5,442 respondents who had received a master's degree in 1958.[17] For most of these, the master's degree was a terminal degree, and they had no further contact with a graduate or professional school between 1958 and 1963. Only one quarter of all the 1958 master's degree recipients had been engaged in additional graduate degree study at some time between June of 1958 and the summer of 1963, and only 10 per cent (384) of the men and 3 per cent (43) of the women had received the Ph. D. (see Table 27). Smaller proportions had received other advanced degrees, most frequently the doctorate in education.

If we consider only those masters who sought the Ph. D., we find that five years after the master's, Ph. D. candidates still outnumber Ph. D. recipients. This is especially true for women, where candidates outnumber recipients by two to one. One might have assumed that the highly selected group of women who went on beyond the master's degree to seek a doctorate would be able to progress as fast as the men, but evidently the social obstacles which initially delay women's entrance into the area of graduate education are operative even at this advanced level.

However, as was so often observed throughout this study, these over-all findings obscure the very significant differences by field of study. Enrollment patterns and degree completion rates need to be examined by field if any meaningful comparisons and conclusions are to be reached.

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[17] This is the weighted N for table purposes. The number of actual respondents is 3,649.

TABLE 27

ADDITIONAL GRADUATE DEGREE ENROLLMENT AFTER THE 1958 MASTER'S DEGREE WAS RECEIVED

Graduate Degree Enrollment	Total Group		Men		Women	
	N	%	N	%	N	%
Total	5442	100.0	3706	100.0	1736	100.0
No additional graduate degree work	4082	75.0	2562	69.1	1520	87.6
Candidate for academic degree[a]	544	10.0	445	12.0	99	5.7
Professional degree recipient or candidate[b]	266	4.9	215	5.8	51	2.9
Recipient of second Master's degree	79	1.5	63	1.7	16	0.9
Ph. D. recipient	427	7.8	384	10.4	43	2.5
Recipient of second degree and candidate for third[a]	44	0.8	37	1.0	7	0.4

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[a] Approximately 69 per cent of the men candidates and 72 per cent of the women candidates were studying for the Ph. D.

[b] Because, at the time of the 1963 survey, some respondents were both "degree recipients" and "degree candidates" it was impossible to establish clear-cut separate categories for this group. However, detailed tabulations show that degree candidates outnumbered degree recipients 3 to 1.

Differences in graduate enrollments by field of study--both at the undergraduate and graduate levels--have been thoroughly established and documented in the earlier (1960) follow-up study of degree recipients, and are further reinforced by the findings in the preceding section of this report which dealt with 1958 bachelor's degree recipients. The subsequent study histories of the 1958 masters add further confirmatory evidence.

Continued or additional graduate work is undertaken most often by recipients of master's degrees in the natural and social sciences. The greatest proportions of men enrolled in additional graduate work after 1958 were in the following fields: biological science, physics, history, sociology and anthropology, and philosophy (see Table 28). Additional graduate degree enrollment was comparatively low for those who had earned master's degrees in engineering in 1958--especially industrial, mechanical, and civil engineering. It continues to be evident that the master's degree in engineering, business and commerce, or education is most often a terminal degree.

Degree completion varied surprisingly by field. Looking first at Ph. D.'s only, as can be seen in Table 28, we see that the outstanding field is chemistry, where 42 per cent of the men who had received the master's degree in 1958 had actually obtained a Ph. D. by 1963. Those few men who had obtained a degree in philosophy were also very rapid Ph. D. recipients. Biological science is another "rapid completion" field; of the 1958 masters, 37 per cent were Ph. D. holders in 1963. Physics (33%), mining engineering (33%), psychology (30%), and sociology and anthropology (29%) are all relatively high in this respect. Most other fields show slow degree completion. For example, in history, English, and the foreign languages, fields where over half of the men with master's degrees were enrolled for further study, fewer than 20 per cent had actually obtained a doctorate (see Table 28).

DEGREE ENROLLMENT BY 1958 GRADUATE FIELD

1958 Graduate Field	Total N	Total %	No additional graduate degree work	Ph. D. recipient	Candidate for academic degree	Professional degree recipient or candidate	Recipient of second Master's degree	Recipient of second degree and candidate for third	Total additional graduate degree enrollment
Total Men	3706	100.0	69.1	10.4	12.0	5.8	1.7	1.0	30.9
Natural Science	549	99.9	47.5	29.7	16.8	3.8	0.5	1.6	52.4
Biological science	142	100.0	36.6	37.3	13.4	9.2	0.7	2.8	63.4
Chemistry	91	100.1	44.0	41.8	11.0	3.3	-	-	56.1
Earth science	93	100.1	61.3	19.4	17.2	1.1	-	1.1	38.8
Physics	91	100.1	39.6	33.0	22.0	3.3	-	2.2	60.5
Other physical sciences	22	99.9	50.0	18.2	18.2	4.5	4.5	4.5	49.9
Mathematics	110	100.0	59.1	18.2	20.9	-	0.9	0.9	40.9
Engineering	570	100.0	72.6	10.5	10.9	2.3	2.3	1.4	27.4
Chemical	61	100.0	52.5	24.6	19.7	1.6	-	1.6	47.5
Civil	60	100.1	71.7	6.7	16.7	3.3	1.7	-	28.4
Electrical	155	100.1	69.7	9.7	14.2	2.6	2.6	1.3	30.4
Industrial	77	100.0	89.6	1.3	2.6	2.6	2.6	1.3	10.4
Mechanical	123	100.0	79.7	8.1	6.5	0.8	3.3	1.6	20.3
Mining	27	100.0	51.9	33.3	3.7	3.7	3.7	3.7	48.1
Other engineering	67	100.0	74.6	9.0	10.4	3.0	1.5	1.5	25.4
Social Science	393	99.9	47.8	18.3	24.9	4.6	2.5	1.8	52.1
Economics	73	100.0	56.2	9.6	30.1	4.1	-	-	43.8
History	85	100.1	38.8	16.5	37.6	2.4	2.4	2.4	61.3
Political science	67	100.0	56.7	17.9	20.9	1.5	3.0	-	43.3
Psychology	94	100.1	42.6	29.8	12.8	9.6	2.1	3.2	57.5
Sociology and anthropology	31	100.0	35.5	29.0	29.0	6.5	-	-	64.5
Other social sciences	43	100.0	58.1	4.7	20.9	2.3	9.3	4.7	41.9
Humanities and Arts	314	100.0	57.3	10.5	24.8	5.1	1.3	1.0	42.7
English and journalism	111	99.9	47.7	12.6	33.3	3.6	1.8	0.9	52.2
Fine arts	120	100.0	73.3	2.5	17.5	5.0	0.8	0.8	26.6
Foreign language	37	100.0	45.9	18.9	35.1	-	-	-	54.0
Philosophy	22	100.0	36.4	40.9	22.7	-	-	-	63.6
Religion	24	100.0	58.3	-	8.3	25.0	4.2	4.2	41.7
Health	60	100.0	73.3	10.0	8.3	6.7	1.7	-	26.7
Agriculture	77	100.0	53.2	28.6	15.6	1.3	-	1.3	46.8
Business and Commerce	505	100.0	87.3	2.2	6.5	3.4	0.2	0.4	12.7
Education	1116	99.9	79.1	1.4	5.1	10.9	2.8	0.6	20.8
Other Fields	122	100.1	90.2	0.8	6.6	2.5	-	-	9.9

TABLE 28W

DEGREE ENROLLMENT BY 1958 GRADUATE FIELD

1958 Graduate Field	Total N	Total %	No additional graduate degree work	Ph. D. recipient	Candidate for academic degree	Professional degree recipient or candidate	Recipient of second Master's degree	Recipient of second degree and candidate for third	Total additional graduate degree enrollment
Total Women	1736	100.0	87.6	2.5	5.7	2.9	0.9	0.4	12.4
National Science	96	100.0	66.7	21.9	10.4	-	1.0	-	33.3
Biological science	43	100.1	60.5	32.6	7.0	-	-	-	39.6
Chemistry	18	100.1	66.7	27.8	5.6	-	-	-	33.4
Earth science	4	*							
Physics	4	*							
Mathematics	27	100.0	74.1	7.4	14.8	-	3.7	-	25.9
Engineering	1	*							
Social Science	154	99.9	68.2	7.8	15.6	3.2	3.2	1.9	31.7
Economics	8	*							
History	31	100.1	74.2	6.5	12.9	-	-	6.5	25.9
Political science	14	99.9	64.3	7.1	14.3	7.1	7.1	-	35.6
Psychology	53	100.0	66.0	11.3	15.1	3.8	1.9	1.9	34.0
Sociology and anthropology	16	99.9	37.5	12.5	31.2	12.5	6.2	-	62.4
Other social sciences	32	100.0	84.4	-	12.5	-	3.1	-	15.6
Humanities and Arts	225	99.9	81.3	3.1	12.0	0.9	2.2	0.4	18.6
English and journalism	90	100.0	77.8	5.6	12.2	1.1	2.2	1.1	22.2
Fine arts	72	100.1	79.2	1.4	16.7	-	2.8	-	20.9
Foreign language	30	99.9	80.0	3.3	10.0	3.3	3.3	-	19.9
Philosophy	3	*							
Religion	30	100.0	96.7	-	3.3	-	-	-	3.3
Health	64	100.1	90.6	-	4.7	1.6	1.6	1.6	9.5
Nursing	40	100.0	87.5	-	5.0	2.5	2.5	2.5	12.5
Other health	24	100.0	95.8	-	4.2	-	-	-	4.2
Education	961	100.0	92.4	0.2	2.6	4.3	0.4	0.1	7.6
Home Economics	61	100.0	91.8	-	4.9	3.3	-	-	8.2
Other Fields	174	100.0	94.8	0.6	4.0	-	-	0.6	5.2

*Too few cases to compute per cent.

When other advanced degrees are added in with the Ph. D.'s, as is done in Table 29, the differences become even more dramatic. The "rapid degree completion" fields--the natural sciences, psychology, philosophy, and sociology and anthropology--show further gains in degrees received, whereas the slow fields (English, history, foreign languages) show primarily increases in the number of candidacies. Whatever the reasons for this basic difference--and some of them will be explored later in this section--there can be little doubt that this is one of the most persistent and fundamental characteristics of the present graduate education scene.

It came as somewhat of a surprise that not only for women, but for men as well, the time lag between receipt of a degree and enrollment for subsequent academic work is as great for M. A.'s as it is for the bachelor's. One might have assumed that M. A. recipients who plan to go on are well on their way toward their ultimate goal (in many instances the M. A. is merely an almost automatic "requirement" to be fulfilled on the way to the Ph. D.). Yet, as shown in Table 30, 18 per cent of the men (and 37% of the women) waited at least two years before enrolling for another academic degree, usually the Ph. D. As was shown in Table 3, page 9, this compares with 19 per cent of the men and 25 per cent of the women who put off enrollment for their first graduate degree by two years or more after they received the bachelor's degree. For men, postponed study at the post-master's level was most characteristic of the "slow" fields, but as can be seen in Table 31, the relationship is not a very strong one and there are exceptions. In particular, in several social science fields degree completion is slow (economics, history, political science) although early enrollment predominates.

The slow pace at which many women proceed with graduate study is illustrated in Table 31. It is of particular interest to note that 60 per cent of the women recipients of master's degrees in education postponed enrollment for additional work to the fall of 1960.

TABLE 29

CURRENT DEGREE CANDIDATES AND DEGREE RECIPIENTS BY 1958 GRADUATE FIELD

1958 Graduate Field	Men			Women		
	Total N	Degree Candidates[a] %	Degree Recipients[b] %	Total N	Degree Candidates[a] %	Degree Recipients[b] %
Total	3706	13.0	18.9	1736	6.1	6.7
Natural Science	549	18.4	35.6	96	10.4	22.9
Biological science	142	16.2	50.0	43	7.0	32.6
Chemistry	91	11.0	45.1	18	5.6	27.8
Earth science	93	18.3	21.6	4	*	*
Physics	91	24.2	38.5	4	*	*
Other physical sciences	22	22.7	31.7	-	-	-
Mathematics	110	21.8	20.0	27	14.8	11.1
Engineering	570	12.3	16.5	1	*	*
Chemical	61	21.3	27.8	-	-	-
Civil	60	16.7	11.7	-	-	-
Electrical	155	15.5	14.9	-	-	-
Industrial	77	3.9	7.8	-	-	-
Mechanical	123	8.1	13.8	-	-	-
Mining	27	7.4	44.4	-	-	-
Other engineering	67	11.9	15.0	-	-	-
Social Science	393	20.6	29.1	154	17.5	16.1
Economics	73	30.1	13.7	8	*	*
History	85	40.0	23.7	31	19.4	13.0
Political science	67	20.9	22.4	14	14.3	21.3
Psychology	94	16.0	44.7	53	17.0	18.9
Sociology and anthropology	31	29.0	35.5	16	31.2	31.2
Other social sciences	43	25.6	21.0	32	12.5	3.1

TABLE 29 --Continued

1958 Graduate Field	Men Total N	Men Degree Candidates[a] %	Men Degree Recipients[b] %	Women Total N	Women Degree Candidates[a] %	Women Degree Recipients[b] %
Humanities and Arts	314	25.8	18.9	225	12.4	6.7
English and journalism	111	33.9	18.9	90	13.3	10.0
Fine arts	120	18.3	9.1	72	16.7	4.2
Foreign language	37	35.1	18.9	30	10.0	9.9
Philosophy	22	22.7	40.9	3	*	*
Religion	24	12.5	33.2	30	3.3	–
Health	60	8.3	18.4	64	6.3	4.8
Nursing	-	-	-	40	7.5	7.5
Other health	-	-	-	24	4.2	-
Home Economics	-	-	-	61	4.9	3.3
Agriculture	77	16.9	31.2	-	-	-
Business and Commerce	505	6.9	6.2	-	-	-
Education	1116	5.7	15.7	961	2.7	5.0
Other Fields	122	6.6	3.3	174	4.0	1.2

[a] Candidates for graduate degrees include the following two categories: candidates for academic degrees and respondents who have received a second graduate degree and are candidates for a third graduate degree.

[b] Degree recipients include: professional degree recipients, recipients of a second M. A., Ph. D. recipients, and recipients of a second graduate degree who are also candidates for a third graduate degree.

*Too few cases to compute per cent.

TABLE 30

TIME OF FIRST ADDITIONAL GRADUATE DEGREE ENROLLMENT

Graduate Degree Enrollment	Time of Enrollment									
	Men					Women				
	Total Enrolled N	Total Enrolled %	1958-1960 %	1960-1963 %	Time Unknown %	Total Enrolled N	Total Enrolled %	1958-1960 %	1960-1963 %	Time Unknown %
Total	1144	100.0	78.6	18.2	3.2	216	100.1	61.7	37.0	1.4
Ph. D. recipient	384	100.1	95.1	3.4	1.6	43	100.0	95.3	4.7	-
Candidates academic degree	445	100.0	68.6	26.0	5.4	99	100.0	55.5	42.5	2.0
Professional degree recipient and candidate	215	99.9	69.3	28.3	2.3	51	100.1	33.4	66.7	-
Recipient of second MA	63	100.0	73.0	25.4	1.6	16	99.7	93.5	6.2	-
Recipient of second graduate degree and candidate for third	37	99.9	89.1	8.1	2.7	7	*			
Current Candidates	482	100.0	70.1	24.7	5.2	106	100.0	56.6	40.6	2.8
Candidate academic degree	445	100.0	68.6	26.0	5.4	99	100.0	55.5	42.5	2.0
Recipient of second graduate degree and candidate for third	37	99.9	89.1	8.1	2.7	7	*			
Degree Recipients	699	100.0	84.8	13.3	1.9	117	100.1	66.7	32.5	0.9
Ph. D. recipient	384	100.1	95.1	3.4	1.6	43	100.0	95.3	4.7	-
Professional degree recipient and candidate	215	99.9	69.3	28.3	2.3	51	100.1	33.4	66.7	-
Recipient of second MA	33	100.0	73.0	25.4	1.6	16	99.7	93.5	6.2	-
Recipient of second graduate degree and candidate for third	37	99.9	89.1	8.1	2.7	7	*			

*Too few cases to compute per cent.

TABLE 31

TIME OF FIRST ADDITIONAL GRADUATE DEGREE ENROLLMENT BY 1958 GRADUATE FIELD

1958 Graduate Field	Time of Enrollment									
	Men					Women				
	Total Enrolled N	Total Enrolled %	1958-1960 %	1960-1963 %	Time Unknown %	Total Enrolled N	Total Enrolled %	1958-1960 %	1960-1963 %	Time Unknown %
Total	1144	100.0	78.6	18.2	3.2	216	100.1	61.7	37.0	1.4
Natural Science	288	100.0	86.8	11.8	1.4	32	100.0	87.5	12.5	-
Biological science	90	99.9	94.4	3.3	2.2	17	99.9	94.0	5.9	-
Chemistry	51	100.0	86.3	11.7	2.0	6	*			
Earth science	36	100.1	72.3	27.8	-	1	*			
Physics	55	100.0	89.1	9.1	1.8	1	*			
Other physical science	11	100.1	81.9	18.2	-	-				
Mathematics	45	99.9	82.2	17.7	-	7	*			
Engineering	156	100.0	70.5	25.0	4.5	-				
Chemical	29	99.8	86.1	10.3	3.4					
Civil	17	100.1	53.0	47.1	-					
Electrical	47	99.9	63.8	34.0	2.1					
Industrial	8	*								
Mechanical	25	100.0	76.0	20.0	4.0					
Mining	13	100.1	92.4	7.7	-					
Other	17	100.0	76.4	11.8	11.8					
Social Science	205	100.0	85.9	10.7	3.4	49	100.0	69.4	26.5	4.1
Economics	32	100.0	81.3	9.3	9.4	3	*			
History	52	99.9	92.3	5.7	1.9	8	*			
Political science	29	99.9	82.7	13.8	3.4	5	*			
Psychology	54	100.1	90.8	9.3	-	18	100.1	66.7	27.8	5.6
Sociology and anthropology	20	100.0	75.0	15.0	10.0	10	100.0	80.0	20.0	-
Other social science	18	100.1	77.9	22.2	-	5	*			
Humanities and Arts	134	100.0	76.9	17.9	5.2	42	100.0	78.6	21.4	-
English and journalism	58	99.9	79.3	17.2	3.4	20	100.0	70.0	30.0	-
Fine arts	32	99.9	59.3	31.2	9.4	15	100.0	86.7	13.3	-
Foreign language	20	100.0	85.0	15.0	-	6	*			
Philosophy	14	99.9	85.7	7.1	7.1	-				
Religion	10	100.0	90.0	-	10.0	1	*			

TABLE 31 --Continued

1958 Graduate Field	Time of Enrollment									
	Men					Women				
	Total Enrolled N	Total Enrolled %	1958-1960 %	1960-1963 %	Time Unknown %	Total Enrolled N	Total Enrolled %	1958-1960 %	1960-1963 %	Time Unknown %
Health	16	99.7	68.6	24.9	6.2	6	*			
Nursing	-	-	-	-	-	5	*			
Other	-	-	-	-	-	1	*			
Agriculture	36	100.1	83.4	13.9	2.8	-				
Home Economics	-	-	-	-	-	5	*			
Business and Commerce	64	99.9	70.3	21.8	7.8	-				
Education	233	100.1	71.7	27.5	0.9	73	100.1	39.8	60.3	-
Other Fields	12	100.0	50.0	25.0	25.0	9	*			

*Too few cases to compute per cent.

B. Study Patterns

By the time they reach the final stage of graduate study--the post-master's phase--fewer than half of the men are full-time, continuous students. For women, the pattern of predominantly part-time and intermittent study continues with fewer than one-third full-time and continuously enrolled.

As shown in detail in Table 32, only the few men and women who pursue professional degrees (excluding the doctorate in education) fit the stereotype of the graduate student for whom study is a full-time activity until the degree is obtained. Ph. D. candidates--men and women--are split about evenly between full-time and less than full-time groups and, again, field of study is the discriminating variable. Continuous, full-time study is the usual pattern in the natural sciences (except for mathematics) and in chemical engineering. Graduate study in other fields of engineering, and especially in the humanities and the arts and education, is more frequently on a part-time or "on and off" basis (see Table 33).

According to our respondents, the most important reason for not studying continuously full-time while working for one's graduate degree was the financial problem (see Table 34). Of those men who said they did not study continuously full-time while working toward a graduate degree, only 10 per cent gave "course work completed, working on thesis" as a reason for noncontinuous study; thus it can be seen that the "candidate" group includes only a small proportion of students in "ABD" (all but dissertation) status.

Among the women the need to devote more time to the family was of concern as was the financial problem. Time for family was the prime reason for having given up the pursuit of one advanced graduate degree (the "discontinued study" category in Table 34).

TABLE 32

STUDY PATTERNS OF RESPONDENTS ENROLLED FOR ADDITIONAL GRADUATE DEGREE

Degree Received or Sought	Graduate Degree Enrollment N	%	Per Cent Full-Time	Alternated	Part-Time	Discontinued	NA
Total Men	1144	100.0	44.6	12.5	37.4	4.8	0.7
M. A.	150	100.1	32.7	12.7	47.3	6.7	0.7
Ph. D.	704	100.0	48.9	11.6	36.1	3.3	0.1
Ed. D.	91	100.1	18.7	15.4	48.4	17.6	-
M. D.	15	100.0	93.3	6.7	-	-	-
D. D. S.	2	*					
LL. B., J. D.	27	100.0	81.5	3.7	11.1	3.7	-
Divinity degrees	13	100.0	84.6	-	15.4	-	-
Other and degree unknown	142	99.9	35.9	18.3	38.0	3.5	4.2
Total Women	216	99.9	31.9	12.0	45.8	9.3	0.9
M. A.	52	100.0	23.1	11.5	63.5	1.9	-
Ph. D.	106	100.0	43.4	13.2	39.6	3.8	-
Ed. D.	22	99.9	4.5	13.6	18.2	63.6	-
M. D.	1	*					
LL. B., J. D.	1	*					
Divinity degrees	1	*					
Other and degree unknown	33	100.0	21.2	9.1	60.6	3.0	6.1

While studying for your most recent graduate degree, did you study (are you studying) continuously, full-time?

1. Yes, I studied continuously, full-time.
2. No, I alternated between study and nonstudy periods, dropping studies for one semister or more (not counting summer terms) prior to obtaining the graduate degree enrolled for.
3. No, I completed all or some graduate work as a part-time student.
4. No, I enrolled for a degree which I did not obtain and which I am not working on at present. (A different degree was subsequently received or is being sought.)

* Too few cases to compute per cent.

TABLE 33M

STUDY PATTERN ACCORDING TO GRADUATE FIELD

Graduate Field	Graduate Degree Enrollment N	Graduate Degree Enrollment %	Study Pattern Full-Time %	Study Pattern Alternated %	Study Pattern Part-Time %	Study Pattern Discontinued %	Study Pattern NA %
Total Men	1144	100.0	44.6	12.5	37.4	4.8	0.7
Natural Science	292	100.0	58.9	7.2	31.8	2.1	-
Biology	92	100.1	59.8	13.0	27.2	-	-
Chemistry	52	99.9	69.2	1.9	26.9	1.9	-
Earth science	37	100.0	62.2	8.1	29.7	-	-
Physics	47	100.0	63.8	4.3	29.8	2.1	-
Other physical science	12	99.9	58.3	8.3	33.3	-	-
Mathematics	52	100.0	40.4	3.8	48.1	7.7	-
Engineering	124	99.9	41.1	4.8	50.8	3.2	-
Chemical	24	100.0	58.3	12.5	25.0	4.2	-
Civil	14	100.0	28.6	-	64.3	7.1	-
Electrical	33	100.0	42.4	6.1	48.5	3.0	-
Industrial	2	*					
Mechanical	24	100.0	37.5	4.2	58.3	-	-
Mining	9	*					
Other	18	100.0	33.3	-	61.1	5.6	-
Social Science	180	100.0	45.0	14.4	36.7	3.3	0.6
Economics	37	99.9	48.6	5.4	43.2	2.7	-
History	44	99.9	40.9	22.7	29.5	6.8	-
Political science	25	100.0	44.0	16.0	36.0	4.0	-
Psychology	46	100.0	43.5	13.0	43.5	-	-
Sociology and anthropology	12	100.0	41.7	25.0	25.0	-	8.3
Other social science	16	99.8	56.2	6.2	31.2	6.2	-
Humanities and Arts	116	100.1	38.8	23.3	32.8	5.2	-
English and journalism	47	100.0	25.5	25.5	42.6	6.4	-
Fine arts	24	100.1	29.2	37.5	29.2	4.2	-
Foreign language	19	100.0	42.1	26.3	26.3	5.3	-
Philosophy	10	*					
Religion	16	99.9	81.2	-	18.7	-	-
Health	28	100.0	85.7	7.1	3.6	3.6	-
Agriculture	18	100.0	38.9	22.2	38.9	12.1	-
Business and Commerce	66	100.0	36.4	3.0	48.5	-	-
Education	188	100.0	19.7	19.7	48.9	11.2	0.5
Other fields	37	100.0	73.0	5.4	18.9	2.7	-
Field unknown	95	99.9	44.2	16.8	30.5	2.1	6.3

TABLE 33W

STUDY PATTERN ACCORDING TO GRADUATE FIELD

Graduate Field	Graduate Degree Enrollment		Study Pattern				
	N	%	Full-Time %	Alternated %	Part-Time %	Discontinued %	NA %
Total Women	216	99.9	31.9	12.0	45.8	9.3	0.9
Natural Science	29	99.9	62.1	10.3	24.1	3.4	-
Biological science	16	99.9	68.7	6.2	25.0	-	-
Chemistry	6	*					
Earth science	1	*					
Physics	1	*					
Mathematics	5	*					
Social Science	37	99.9	43.2	16.2	37.8	2.7	-
Economics	2	*					
History	4	*					
Political science	3	*					
Psychology	16	99.9	43.7	12.5	43.7	-	-
Sociology and anthropology	7	*					
Other social science	5	*					
Humanities and Arts	41	100.0	26.8	17.1	53.7	2.4	-
English and journalism	21	100.0	28.6	14.3	57.1	-	-
Fine arts	13	100.0	15.4	15.4	61.5	7.7	-
Foreign language	5	*					
Religion	2	*					
Health	6	*					
Nursing	2	*					
Other	4	*					
Education	43	100.0	7.0	9.3	48.8	34.9	-
Home Economics	8	*					
Other Fields	27	100.0	29.6	7.4	63.0	-	-
Field unknown	25	100.0	24.0	12.0	48.0	8.0	8.0

*Too few cases to compute per cent.

TABLE 33 --Continued

While working toward your most recent graduate degree, did you study (are you studying) continuously, full-time?

1. Yes, I studied continuously, full-time.

2. No, I alternated between study and nonstudy periods, dropping studies for one semester or more (not counting summer terms) prior to obtaining the graduate degree enrolled for.

3. No, I completed all or some graduate work as a part-time student.

4. No, I enrolled for a degree which I did not obtain and which I am not working on at present. (A different degree was subsequently received or is being sought.)

TABLE 34

MOST IMPORTANT REASON FOR NONCONTINUOUS GRADUATE STUDY

Study Pattern	Noncontinuous Graduate Study N	Noncontinuous Graduate Study %	Financial loss %	Scholarship terminated %	Poor Grades %	Moved away %	Undecided field %	Military service %	Work thesis %	Time family %	Job experience %	Good job no study %	Tired Student %	Poor Investment %	No Answer %
Total Men[a]	634	100.1	55.8	1.3	1.4	2.2	0.6	1.4	10.4	2.1	7.6	3.2	1.6	1.3	11.2
Alternated	143	100.1	48.3	2.8	1.4	-	-	2.8	17.5	1.4	9.1	3.5	3.5	-	9.8
Part-time	428	99.8	60.3	0.9	1.6	0.9	0.9	1.2	8.6	1.2	8.2	2.8	0.9	0.9	11.4
Discontinued[b]	55	100.2	47.3	-	-	16.4	-	-	7.3	9.1	-	5.5	1.8	7.3	5.5
No answer	8	*													
Total Women[a]	147	99.9	29.9	1.4	0.7	6.1	-	-	8.8	21.0	8.2	2.0	0.7	-	21.1
Alternated	26	100.0	38.5	3.8	-	3.8	-	-	23.1	15.4	7.7	-	-	-	7.7
Part-time	99	99.9	33.3	1.0	1.0	7.1	-	-	6.1	19.2	4.0	3.0	1.0	-	24.2
Discontinued[b]	2	100.0	5.0	-	-	-	-	-	5.0	40.0	30.0	-	-	-	20.0
No answer	2	*													

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*Too few cases to compute per cent.

[a] Excludes graduates who studied full time.

[b] Discontinued respondents are graduates who discontinued study for a degree but subsequently sought or received a different degree.)

TABLE 34--Continued

Which of the following reasons was your most important reason for not studying continuously, full-time until you received the degree?

1. Financial (loss of financial support from parents, spouse stopped working, could not afford to study full-time, etc.)

2. Scholarship, fellowship, or grant terminated.

3. Poor grades or progress; could not carry full-time continuous course load.

4. Moved away from area where the university I was attending i located.

5. Undecided about field of study.

6. Military service interrupted my studies.

7. All course work completed, working on thesis.

8. Needed more time to devote to my family.

9. Anxious to acquire more job experience.

10. Could get a desirable job without further study.

11. Tired of being s student (or full-time student).

12. Decided it was a poor investment of time and money to seek a graduate degree.

As one might expect, those who had obtained the Ph. D. or a professional degree by the time they received the questionnaire were more likely to feel that the rate of completion of graduate study was "just right" in comparison with those still in candidate status (see Table 35). The overwhelming majority of the latter perceived their progress as being too slow. Again, financial reasons were cited as the overwhelming obstacle to speedier completion, although the self-incriminating answer ("I did not push myself hard enough") rang a bell with a substantial proportion of both degree holders and current candidates. Other obstacles often cited by critics of the present system of graduate education, such as the thesis and language requirements, and faculty pressure for student "slave labor," seemed less important, although among degree holders in the natural sciences this last reason was given by 14 per cent of the respondents (see Table 36).

C. Satisfaction with Graduate Study Fields

One of the key findings of the 1960 study of college graduates--among holders of bachelor's as well as master's degrees--was the high level of satisfaction with one's choice of field study. There were remarkably few retrospective, wishful expressions for a different study specialization or career. It seems quite clear from this and other studies that among college graduates uncertainties about occupational and academic interests are solved either before or during the undergraduate years. While many students have made a firm choice of field by the time they enter college, others experiment and switch a good deal at the undergraduate level. However, by the time they earn their undergraduate degree, their broad area of interest is well established although there may be some further switching among adjoining or related fields. By the time students have obtained a first graduate degree--the master's--they usually are fully committed to a specific field of study. Similarly, very few graduate degree recipients changed their field of study while working for an advanced degree (see Table 37).

TABLE 35

COMPLETION RATES AND REASON FOR CONSIDERING GRADUATE STUDY TOO SLOW BY DEGREE RECIPIENTS AND CANDIDATES

Degree Enrolled	Total		Completion Rates[a]				Completion "Too Slow"		Reason for Considering Graduate Study "Too Slow"								
	N	%	% Too Fast	% Just Right	% Too Slow	% No Answer	N	%	% Not Afford	% Course Difficulty	% Faculty Pressure	% No Push	% Inconvenient Schedule	% Language Requirement	% Thesis Requirement	% Unaware Routine	% No Answer
Degree Recipients:																	
Men	541	100.0	2.6	64.5	29.9	3.0	162	100.0	40.7	2.5	8.0	21.6	2.5	4.3	9.9	2.5	8.0
Women	80	100.1	2.5	60.0	33.8	3.8	27	99.9	33.3	—	11.1	14.8	7.4	3.7	7.4	3.7	18.5
Degree Candidates:[b]																	
Men	603	100.1	1.0	28.9	69.0	1.2	416	99.8	55.0	1.9	5.0	13.5	2.6	2.9	6.2	3.6	9.1
Women	136	100.1	8.1	24.3	66.2	1.5	90	99.9	51.1	1.1	12.2	8.9	3.3	1.1	3.3	6.7	12.2

[a] Do you feel that the rate at which you have been, or are, completing graduate study is too fast, just right, or too slow?

[b] Does not include recipients of an additional degree who are candidates for a third graduate degree or who did not answer.

TABLE 35--Continued

If too slow, where would you put the blame?

1. Could not afford to study full-time or continuously for financial reasons.

2. Found courses too difficult or the professors too demanding.

3. Pressure from faculty to participate in research work or teaching, thereby postponing completion of thesis.

4. Did not push myself hard enough.

5. Courses were not conveniently scheduled or courses not offered when needed for my program.

6. Had difficulty meeting language requirments.

7. Had difficulty meeting thesis requirements.

8. Was not aware of some academic routines or requirements, and lost time on that account.

TABLE 36

REASON FOR CONSIDERING GRADUATE STUDY COMPLETION TOO SLOW BY DEGREE RECIPIENTS

Field of First Additional Degree	Total Degree Recipients Men and Women		Reason								
	N	%	Not Afford %	Course Difficulty %	Faculty Pressure %	No Push %	Inconvenient Schedule %	Language Requirement %	Thesis Requirement %	Unaware Routine %	No Answer %
Total[a]	189	99.9	39.7	2.1	8.5	20.6	3.2	4.2	9.5	2.6	9.5
Natural science	70	100.1	38.6	2.9	14.3	18.6	1.4	1.4	10.0	2.9	10.0
Engineering	22	100.0	13.6	-	-	27.3	-	18.2	27.3	-	13.6
Social science	38	100.1	31.6	5.3	5.3	26.3	10.5	5.3	5.3	7.9	2.6
Humanities and arts	17	100.1	47.1	-	11.8	29.4	-	5.9	-	-	5.9
Health	7	*									
Business and commerce	3	*									
Education	24	100.0	87.5	-	8.3	-	-	-	4.2	-	-
Other	8	*									

[a] Total does not include 506 respondents who have not received the first additional degree yet or did not answer field.

*Too few cases to compute per cents.

TABLE 36--Continued

If too slow, where would you put the blame?

1. Could not afford to study full-time or continously for financial reasons.

2. Found courses too difficult or the professors too demanding.

3. Pressure from faculty to participate in research work or teaching, thereby postponing completion of thesis.

4. Did not push myself hard enough.

5. Courses were not conveniently scheduled or courses not offered when needed for my program.

6. Had difficulty meeting language requirements.

7. Had difficulty meeting thesis requirements.

8. Was not aware of some academic routines or requirements, and lost time on that account.

TABLE 37

WHILE WORKING FOR A MASTER'S[a] OR DOCTOR'S DEGREE DID YOU CHANGE YOUR FIELD OF STUDY?

New Graduate Field	Graduate Degree Enrolled			Changed Fields		
	N	%	No Change %	During M. A. Study[b] %	During Ph. D. Study[c] %	NA %
Total Men	1144	100.0	93.5	2.1	2.2	2.2
Natural science	210	100.0	93.8	1.9	3.3	1.0
Engineering	76	100.0	96.1	-	3.9	-
Social science	129	100.0	95.3	0.8	2.3	1.6
Humanities and Arts	80	99.8	91.2	6.2	1.2	1.2
Health	15	100.0	80.0	13.3	-	6.7
Business and Commerce	55	100.0	85.5	14.5	-	-
Education	163	100.0	90.2	1.2	5.5	3.1
Other	32	99.9	87.5	6.2	3.1	3.1
No answer	384	100.1	96.4	-	0.3	3.4
Total Women	216	99.9	90.7	2.3	2.3	4.6
Natural Science	16	99.9	87.5	6.2	6.2	-
Engineering	-					
Social science	29	100.0	96.6	-	3.4	-
Humanities and Arts	40	100.0	92.5	5.0	2.5	-
Health	12	99.9	83.3	8.3	8.3	-
Business and Commerce	3	*				
Education	37	100.0	100.0	-	-	-
Other	23	99.9	69.6	4.3	4.3	21.7
No answer	56	100.0	92.9	-	-	7.1

*Too few cases to compute per cent.

[a] It was impossible to determine which master's degree was being considered by the respondents: the 1958 degree, one prior to 1958, or one subsequent to 1958.

[b] Changed fields between the time respondent started working for a master's degree and the time he received it.

[c] Changed fields between the time respondent started working for the doctor's degree and the time he received it.

D. Financial Support through Scholarships, Fellowships, and other Forms of Student Aid

Although not every master's degree holder who engages in further graduate study receives some financial support along the way, the great majority of advanced graduate students seem to be successful in this respect. As is shown in Table 38, about half of all the 1958 M. A.'s who were enrolled between 1958 and 1963 for further study reported that during one or more of these years they derived half or more of their income from fellowships, scholarships, assistantships, and other forms of student aid.

Most striking, of course, is the high incidence of support among the "achieving" group, those who have received the Ph. D. since 1958. Of this group, over three-fourths (77% of the men and 81% of the women) were helped financially at some time. Men and women who specialized in the natural sciences did better in this respect than other Ph. D. recipients, but in engineering and the social sciences the proportion of degree recipients who reported support was also high. Even the small number of degree recipients in business and commerce showed a surprisingly high degree of aid received. It is in the humanities, and especially in the field of education, that graduate aid is apparently not available to the majority of students (see Table 39).

With respect to financial support, we find among the M. A. holders--as we did previously for the bachelors--that those working for professional degrees were much less likely to obtain financial support than Ph. D. seekers. As can be seen in Table 38, only 21 per cent of male professional degree recipients--as against 77 per cent of Ph. D. recipients--reported support. As previously indicated, many of these professional degrees were obtained in the field of education which ranks lowest of all fields with respect to availability of financial support.

TABLE ·38

FINANCIAL SUPPORT OF DEGREE ENROLLED RESPONDENTS

Graduate Degree Enrollment	Men				Women			
	Total		Some or All Support	No Support	Total		Some or All Support	No Support
	N	%	%	%	N	%	%	%
Total	1144	100.0	50.3	49.7	216	100.0	40.7	59.3
Ph.D. recipient	384	100.0	76.8	23.2	43	100.0	81.4	18.6
Candidate for academic degree	445	100.0	42.7	57.3	99	100.0	35.4	64.6
Professional degree recipient or candidate	215	100.0	21.4	78.6	51	100.0	15.7	84.3
Recipient of second Master's degree	63	100.0	42.9	57.1	16	99.9	31.2	68.7
Recipient of second degree and candidate for third	37	100.0	48.6	51.4	7	*		

*Too few cases to compute per cent.

TABLE 39

FINANCIAL SUPPORT OF RECIPIENTS OF AN ADDITIONAL DEGREE BEYOND THE 1958 MASTER'S DEGREE

Field of First Additional Graduate Degree	Men				Women			
	Total		Some or All Support	No Support	Total		Some or All Support	No Support
	N	%	%	%	N	%	%	%
Total[a]	541	100.0	66.7	33.3	80	100.1	61.3	38.8
Natural science	191	100.0	80.1	19.9	23	100.0	82.6	17.4
Engineering	70	100.0	78.6	21.4	-	-	-	-
Social science	92	100.0	63.0	37.0	16	100.0	62.5	37.5
Humanities and arts	46	100.0	50.0	50.0	13	100.0	69.2	30.8
Health	21	100.0	47.6	52.4	4	*		
Agriculture	17	100.0	70.6	29.4	-	-	-	-
Business and commerce	22	100.0	81.8	18.2	-	-	-	-
Education	65	100.0	41.5	58.5	14	100.0	14.3	85.7
Other fields	17	100.0	29.4	70.6	10	*		

[a] Excludes nonresponse to field of first graduate degree received.

*Too few cases to compute per cent.

In interpreting the tables corresponding to this section of the report, it is important to realize that these data represent only crude, general indicators of graduate support; they tell us nothing about the actual amounts of money granted, duration of support, etc. It is our feeling, however, that more refined information would merely further emphasize the gap between the affluent and nonaffluent fields.

Ph. D. recipients received considerably more aid than their fellow-students who were still degree candidates five years after the master's degree. This finding emerges very clearly from Table 38. Degree candidates reported aid only half as often as degree recipients; among women the proportion was especially low. Whether degree recipients completed their work more quickly because they were financially able to do so, or whether they received help because they were more promising and more highly motivated cannot be documented from our data, but one suspects from the data on aid applications as seen below that there is a rather complex interrelation between the two factors.

Although the over-all level of support for the degree seekers is lower than for Ph. D. holders, differences by field are still apparent (see Tables 39 and 40). More aid is available in the natural sciences than in other specialties, both for Ph. D. holders (80% of whom received aid) and candidates (55% of whom received aid). In the humanities differences between candidates and Ph. D. recipients were least marked with half in each group receiving some aid. In the social sciences the extent of support for Ph. D. recipients was high (63%) but only 36 per cent of the candidates received full or partial support. In general, these findings coincide with the prevailing popular impression and with data obtained in earlier studies.[18]

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[18] See in particular James A. Davis, Stipends and Spouses: The Finances of American Arts and Sciences Graduate Students. Chicago: University of Chicago Press, 1962.

TABLE 40

FINANCIAL SUPPORT OF CURRENT DEGREE CANDIDATES

Field of Degree Candidacy	Men				Women			
	Total		Some or All Support	No Support	Total		Some or All Support	No Support
	N	%	%	%	N	%	%	%
Total[a]	605	100.0	36.2	63.8	126	100.0	30.2	69.8
Natural science	119	100.0	55.5	44.4	9	*		
Engineering	63	100.0	46.0	54.0	-	-	-	-
Social science	116	100.0	36.2	63.8	23	100.0	43.5	56.5
Humanities and arts	80	100.0	50.0	50.0	35	99.9	34.3	65.7
Health	10	*			6	*		
Business and commerce	50	100.0	10.0	90.0	-	-	-	-
Education	140	100.0	17.1	82.9	32	99.9	6.2	93.7
Other fields	27	100.0	21.7	78.3	21	100.0	19.0	81.0

[a] Excludes nonresponse to field of degree candidacy.

*Too few cases to compute per cent.

For the M. A. holders--as for the B. A. holders discussed in the previous section--lack of financial support is not the result of rejection. Among those men who did not engage in additional graduate degree work after 1958, close to 80 per cent never applied for financial assistance (see Table 41). Obviously, this group includes the bulk of terminal M. A.'s, as well as others who might have decided to postpone graduate study in order to work at least for a while. Only 3 per cent of the "terminal" M. A.'s were turned-down, grant applicants. Among those who went on for further graduate degree work, nonapplication more often than rejection was the reason for not having received financial aid: 28 per cent of the degree candidates--the slow achievers--had not applied for aid. However, 6 per cent were rejected applicants--still a low proportion but higher than for other groups, which suggests that failure to receive aid constituted a real impediment to rapid progress for some of these graduate students. Whatever the motive for not applying--whether it is lack of knowledge, fear of rejection, a feeling, via the academic grapevine, that one lacks backing, or the feeling that the amounts of money available through stipends are inadequate--the fact remains that many graduate students apparently never apply, including many who seek graduate degrees. Only in the social sciences--in sociology and history--are the rejection rates sizable, suggesting that in these fields lack of aid might well have been an important factor in retarding Ph. D. completion on the part of graduate students (see Table 42).

E. Motivation for Graduate Study among the M. A. Group

M. A. recipients who obtained further graduate education since 1958 are obviously a highly select, higher-education oriented group.

TABLE 41M

GRANT EXPERIENCE AND GRADUATE DEGREE ENROLLMENT

Grant Experience	Total Men		No additional graduate degree work		Ph. D. recipient		Candidate for academic degree		Professional degree recipient or candidate		Recipient of second Master's degree		Recipient of second degree and candidate for third	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Total Men	3706	100.0	2562	99.9	384	99.9	445	100.0	215	100.0	63	100.1	37	99.9
Grant accepted		28.4		12.6		83.3		62.7		33.5		54.0		64.8
Granted, not accepted		0.9		1.0		0.5		0.7		0.9		3.2		-
Application rejected		3.3		3.0		2.3		5.8		2.8		3.2		2.7
Didn't apply		63.9		79.4		10.9		28.3		60.5		38.1		29.7
N. A.		3.5		3.9		2.9		2.5		2.3		1.6		2.7

Since June 1958, have you ever applied for any funds in the form of grants, loans, fellowships, schlorships, assistantships, university employment, waived tuition fees, etc. to assist you in graduation or professional school?

1. I did not apply,
2. My application was rejected,
3. My application was granted, but I did not accept the funds;
4. My application was granted, and I accepted the funds;

TABLE 41W

GRANT EXPERIENCE AND GRADUATE DEGREE ENROLLMENT

Grant Experience	Total Women		No additional graduate degree work		Ph. D. recipient		Candidate for academic degree		Professional degree recipient or candidate		Recipient of second Master's degree		Recipient of second degree and candidate for third	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Total Women	1736	100.1	1520	99.9	43	100.1	99	100.0	51	100.0	16	100.0	7	*
Grant accepted		12.1		6.8		81.4		42.4		25.5		62.5		
Granted, not accepted		0.6		0.5		—		1.0		2.0		—		
Application rejected		2.2		1.8		4.7		5.1		5.9		—		
Didn't apply		79.3		84.7		9.3		43.4		66.6		37.5		
N. A.		5.9		6.1		4.7		8.1		—		—		

* Too few cases to compute per cent.

Since June 1958, have you ever applied for any funds in the form of grants, loans, fellowships, schlorships, assistantships, university employment, waived tuition fees, etc. to assist you in graduation professional school?

1. I did not apply;
2. My application was rejected;
3. My application was granted, but I did not accept the funds;
4. My application was granted, and I accepted the funds;

TABLE 42 M

FIELD OF 1958 M. A. AND GRANT EXPERIENCE

Field of 1958 Master's Degree	Total		Grant Experience				
	N	%	Grant Accepted %	Grant Not Accepted %	Application Rejected %	Did Not Apply %	NA %
Total Men	3706	100.0	28.4	0.9	3.3	63.9	3.5
Natural Science	549	100.0	50.6	0.9	4.2	40.3	4.0
Biological science	142	100.0	63.4	1.4	4.9	27.5	2.8
Chemistry	91	100.1	45.1	-	3.3	49.5	2.2
Earth science	93	100.0	37.6	-	4.3	55.9	2.2
Physics	91	100.0	57.1	1.1	2.2	35.2	4.4
Other physical science	22	100.0	45.5	4.5	-	31.8	18.2
Mathematics	110	100.1	45.5	0.9	6.4	41.8	5.5
Engineering	570	100.0	23.3	0.5	1.6	70.7	3.9
Chemical	61	100.0	34.4	-	1.6	60.7	3.3
Civil	60	100.0	28.3	-	1.7	66.7	3.3
Electrical	155	99.9	27.1	-	1.9	69.0	1.9
Industrial	77	100.0	7.8	-	1.3	84.4	6.5
Mechanical	123	100.0	19.5	0.8	0.8	72.4	6.5
Mining	27	100.0	33.3	-	-	63.0	3.7
Other	67	100.0	20.9	3.0	3.0	71.6	1.5
Social Science	393	100.0	40.2	1.0	4.1	50.4	4.3
Economics	73	99.9	27.4	2.7	4.1	61.6	4.1
History	85	100.0	45.9	-	8.2	42.4	3.5
Political science	67	100.1	29.9	-	-	64.2	6.0
Psychology	94	100.1	54.3	-	1.1	41.5	3.2
Sociology and Anthropology	31	100.1	45.2	3.2	9.7	35.5	6.5
Other social science	43	100.1	32.6	2.3	4.7	55.8	4.7
Humanities and Arts	314	100.1	37.6	1.0	3.5	54.8	3.2
English and journalism	111	99.9	46.8	-	3.6	45.9	3.6
Fine arts	120	100.0	20.8	2.5	4.2	70.0	2.5
Foreign language	37	100.0	67.6	-	2.7	27.0	2.7
Philosophy	22	99.9	54.5	-	-	40.9	4.5
Religion	24	100.1	16.7	-	4.2	75.0	4.2

TABLE 42M --Continued

Field of 1958 Master's Degree	Total		Grant Experience				
	N	%	Grant Accepted %	Grant Not Accepted %	Application Rejected %	Did Not Apply %	NA %
Health	60	100.0	16.7	-	3.3	78.3	1.7
Agriculture	77	100.1	42.9	1.3	-	46.8	9.1
Business and Commerce	505	100.0	9.1	0.2	1.2	87.5	2.0
Education	1116	100.0	22.9	1.5	4.6	67.7	3.3
Other Fields	122	100.0	17.2	-	3.3	76.2	3.3

Since June 1958, have you ever applied for any fund, in the form of grants, loans, fellowships, scholarships, assistantships, university employment, received tuition fees, etc. to assist you in graduate or professional school?

1. I did not apply.
2. My application was rejected.
3. My application was granted, but I did not accept the funds.
4. My application was granted, and I accepted the funds.

TABLE 42W

FIELD OF 1958 M.A. AND GRANT EXPERIENCE

Field of 1958 Master's Degree	Total		Grant Experience				
	%	N	Grant Accepted	Grant Not Accepted	Application Rejected	Did Not Apply	NA
Total Women	1736	100.1	12.1	0.6	2.2	79.3	5.9
Natural Science	96	99.9	42.7	1.0	2.1	47.9	6.2
Biology science	43	100.0	46.5	-	-	41.9	11.6
Chemistry	18	100.0	44.4	-	-	55.6	-
Earth science	4	*					
Physics	4	*					
Mathematics	27	100.0	33.3	3.7	7.4	51.9	3.7
Engineering	1	*					
Social Science	154	99.9	26.0	1.9	3.2	65.6	3.2
Economics	8	*					
History	31	100.0	35.5	3.2	-	58.1	3.2
Political science	14	100.0	35.7	-	-	64.3	-
Psychology	53	100.1	30.2	-	5.7	62.3	1.9
Sociology and Anthropology	16	99.9	31.2	-	12.5	50.0	6.2
Other social science	32	99.8	6.2	6.2	-	81.2	6.2
Humanities and Arts	225	100.0	16.0	0.9	3.1	74.2	5.8
English and journalism	90	99.9	20.0	1.1	2.2	73.3	3.3
Fine arts	72	100.0	12.5	-	5.6	73.6	8.3
Foreign language	30	99.9	20.0	3.3	3.3	63.3	10.0
Philosophy	3	*					
Religion	30	100.0	10.0	-	-	86.7	3.3
Health	64	100.0	17.2	1.6	1.6	73.4	6.2
Nursing	40	100.0	22.5	2.5	2.5	67.5	5.0
Other health	24	99.9	8.3	-	-	83.3	8.3
Education	961	100.1	6.8	0.1	2.0	84.0	7.2
Home Economics	61	100.0	4.9	3.3	4.9	83.6	3.3
Other fields	174	100.0	8.0	-	0.6	89.7	1.7

*Too few cases to compute per cent.

These students see in their studies a means of satisfying career objectives as much as a means of satisfying academic and intellectual interests. As one might expect, among advanced degree holders Ph. D. recipients are somewhat more prone to find the "intellectual" answer to the question on principal reason for engaging in the pursuit of the advanced degree than are those who sought professional degrees or a second M. A., but the differences are far from striking (see Table 43).

More important than overt expressions about intellectual versus practical interests--a distinction which is probably not very meaningful for advanced graduate students who think of professional careers as a way of life which conforms to their basic value structure--are the situational and familial factors in the lives of graduate students which may impede or enhance motivation for graduate study. Over 80 per cent of the men were married by 1963, as against fewer than 60 per cent of the women (see Table 44). Almost 32 per cent of the women were single, never having been married. It is apparent that even in this generation there is a residue of the correlation between higher education and spinsterhood so characteristic of earlier periods. However, it is well to remember that many of those who received the M. A. in 1958 were older women, often teachers, who sought the M. A. relatively late in life.

For men, it is more difficult to interpret the data, since age at marriage and time of birth of first child are obviously crucial variables. (Information on this latter point was not sought in the questionnaire.) The data suggest, however, that married men tend to complete their studies faster than those who remain single. Probably the most propitious combination is marriage with postponement of the birth of the first child: because of the wife's earnings, immediate pressures are not too great, while pressures for earnings in the fairly near future are strong.

TABLE 43

WHICH WAS THE MOST IMPORTANT REASON IN YOUR DECISION TO STUDY FOR AN ADVANCED DEGREE?

Graduate Degree Recipients	Total		Reason				
	N	%	Better Job %	Intellectual Interest %	Career Objectives %	Never Occurred %	NA %
Total Men[a]	548	100.1	20.3	38.3	33.6	4.4	3.5
M. A.	98	100.0	44.9	31.6	15.3	3.1	5.1
Ph. D.	382	100.1	13.1	41.4	37.7	4.5	3.4
Ed. D.	22	100.0	27.3	31.8	27.3	13.6	-
M. D.	12	99.9	-	58.3	25.0	8.3	8.3
D. D. S.	2	*					
LL. B. or J. D.	11	100.1	45.5	27.3	27.3	-	-
Divinity Degrees	8	*					
Other	13	100.1	46.2	15.4	38.5	-	-
Total Women[a]	80	100.2	18.8	42.5	28.8	8.8	1.3
M. A.	24	100.0	8.3	54.2	29.2	8.3	-
Ph. D.	43	100.0	11.6	41.9	37.2	9.3	-
Ed. D.	5	*					
M. D.	1	*					
LL. B. or J. D.	1	*					
Other	6	*					

[a] Excludes no answers.

*Too few cases to compute per cent.

TABLE 43--Continued

Which was the most important reason in your decision to study for an advanced degree?

1. Better job and salary opportunities with an advanced degree.

2. Satisfying my academic or intellectual interests.

3. Could not fulfill my career objectives with just an undergraduate degree.

4. It just never occurred to me not to go to graduate or professional school.

TABLE 44

MARITAL STATUS OF HOLDERS OF A 1958 MASTER'S DEGREE

Marital Status	Men		Women	
	N	%	N	%
Total	3706	100.0	1736	100.0
Never married	538	14.5	551	31.7
Married	3013	81.3	1017	58.6
No children	385	10.4	304	17.5
Children	2628	70.9	713	41.1
Widowed, separated, divorced	52	1.4	149	8.6
No answer	103	2.8	19	1.1

Table 45 shows that 16 per cent of the husbands without children, 11 per cent of those with children, and only 7 per cent of the single men had received the Ph. D. by 1963. Marital status plays a much lesser part with respect to professional degrees.

On the other hand, women who are single, divorced, widowed, or separated are more likely to be enrolled for academic degrees (and to obtain a Ph. D.) than married women. However, there is not a great difference in this respect between women with or without children. Clearly, marriage rather than motherhood constitutes the major dividing line. Marital status plays a lesser role for the small number of women who seek or obtain a professional degree (as shown in Table 45).

It is very clear that married men and women who pursue graduate study usually perceive full approval and support of their spouses (see Table 46). This is especially true of men who seek the Ph. D. or who have obtained it: more than two-thirds of them felt that their wives thought it was very important for them to obtain the degree (of those who did not engage in further graduate work, only 34% reported that their wives thought additional study was "very important"). Women who were enrolled did not perceive comparable support: only 49 per cent of the Ph. D. candidates and 53 per cent of the Ph. D. recipients reported that their husbands thought it "very important" for them to pursue graduate work. Interestingly enough, the women who sought a professional degree more often perceived support, perhaps because many of them are older career women (especially in the field of education).

The influence of parents--whose congruent views seemed strongly related to the graduate study plans of the 1958 bachelor's degree recipients--seems to play a very small part for this older group. Still, the less importance parents gave to study for an advanced degree, the less often were their sons and daughters enrolled for advanced degrees (see Table 47).

TABLE 45M

MARITAL STATUS AND GRADUATE DEGREE ENROLLMENT

Marital Status Year of Marriage	Total		No additional graduate degree work	Ph. D. recipient	Candidate for academic degree	Professional degree recipient or candidate	Recipient of second Master's degree	Recipient of second degree and candidate for third
	N	%	%	%	%	%	%	%
Total Men	3706	100.0	69.1	10.4	12.0	5.8	1.7	1.0
Never married	538	100.1	63.4	7.1	17.5	7.8	2.4	1.9
Married, no children	385	100.0	61.5	16.4	13.8	5.5	2.3	0.5
1935-1953	53	100.1	77.4	3.8	13.2	3.8	1.9	-
1954-1957	43	100.0	65.1	16.3	11.6	7.0	-	-
1958	18	100.1	61.1	5.6	27.8	5.6	-	-
1959-1964	98	99.9	56.1	19.4	16.3	6.1	1.0	1.0
No answer	173	100.1	59.0	19.7	11.6	5.2	4.0	0.6
Married, children	2628	100.0	70.5	10.5	11.0	5.5	1.5	1.0
1935-1953	945	100.0	77.7	5.7	8.3	6.0	1.8	0.5
1954-1957	658	100.0	60.3	18.5	12.2	5.9	1.4	1.7
1958	159	99.9	57.2	15.1	18.2	5.7	3.1	0.6
1959-1964	212	100.0	62.7	14.2	15.1	5.7	1.4	0.9
No answer	654	100.0	76.1	7.2	10.6	4.3	0.9	0.9
Widowed, separated, divorced	52	100.0	73.1	9.6	7.7	7.7	1.9	-
1935-1953	23	99.9	73.9	8.7	4.3	8.7	4.3	-
1954-1957	14	100.0	78.6	14.3	7.1	-	-	-
1958	8	*						
1959-1964	3	*						
No answer	4	*						
No answer	103	100.0	90.3	1.0	5.8	2.9	-	-

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*Too few cases to compute per cent.

TABLE 45W

MARITAL STATUS AND GRADUATE DEGREE ENROLLMENT

Marital Status Year of Marriage	Total N	Total %	No additional graduate degree work %	Ph. D. recipient %	Candidate for academic degree %	Professional degree recipient or candidate %	Recipient of second Master's degree %	Recipient of second degree and candidate for third %
Total Women	1736	100.0	87.6	2.5	5.7	2.9	0.9	0.4
Never married	551	100.0	83.1	4.0	8.2	2.7	1.5	0.5
Married, no children	304	100.0	91.4	3.3	4.3	-	0.7	0.3
1935-1953	106	99.9	98.1	0.9	0.9	-	-	-
1954-1957	20	100.0	85.0	-	5.0	-	5.0	5.0
1958	18	100.0	88.9	11.1	-	-	-	-
1959-1964	52	100.0	80.8	7.7	9.6	-	1.9	-
No answer	108	100.1	91.7	2.8	5.6	-	-	-
Married, children	713	100.0	89.6	1.3	4.3	3.9	0.6	0.3
1935-1953	286	100.0	86.4	0.7	5.2	7.0	0.7	-
1954-1957	116	100.1	94.0	0.9	1.7	1.7	0.9	0.9
1958	86	100.0	93.0	-	5.8	1.2	-	-
1959-1964	90	99.9	88.9	4.4	3.3	3.3	-	-
No answer	135	99.9	91.1	1.5	4.4	1.5	0.7	0.7
Widowed, separated divorced	149	100.0	86.6	1.3	6.0	4.7	0.7	0.7
1935-1953	117	100.1	84.6	0.9	6.8	6.0	0.9	0.9
1954-1957	5	*						
1958	7	*						
1959-1964	15	100.0	93.3	-	6.7	-	-	-
No answer	5	*						
No answer	19	100.1	84.2	-	5.3	5.3	5.3	-

*Too few cases to compute per cent.

TABLE 46

SPOUSE'S FEELINGS ABOUT STUDY FOR AN ADVANCED DEGREE

	Total		How Important?		
Graduate Degree Enrollment	N	%	Very	Somewhat	Not Important
			%	%	%
Total Men[a]	2909	100.0	44.1	38.1	17.8
No additional graduate degree work	2011	100.1	34.0	42.3	23.8
Ph. D. recipient	324	100.0	71.3	23.5	5.2
Candidate for academic degree	337	100.0	68.5	29.7	1.8
Professional degree recipient or candidate	162	100.0	60.5	33.9	5.6
Recipient of second Master's degree	49	100.0	51.0	34.7	14.3
Recipient of second degree and candidate for third	26	100.0	57.7	34.6	7.7
Total Women[a]	938	100.1	25.4	39.8	34.9
No additional graduate degree work	842	99.9	22.1	40.2	37.6
Ph. D. recipient	17	100.0	52.9	35.3	11.8
Candidate for academic degree	41	100.1	48.8	41.5	9.8
Professional degree recipient or candidate	29	100.0	69.0	20.7	10.3
Recipient of second Master's degree	6	*			
Recipient of second degree and candidate for third	3	*			

[a] Not married and no answer omitted: Men-797, Women-798.

*Too few cases to compute per cent.

How important does your spouse think it is for you to study for an advanced degree?

1. Very important.
2. Somewhat important.
3. Not important.

TABLE 47

PARENTS' FEELINGS ABOUT STUDY FOR AN ADVANCED DEGREE

Graduate Degree Enrollment	Total		How Important?		
	N	%	Very %	Somewhat %	Not Important %
Total Men[a]	2545	100.0	36.4	42.4	21.2
No additional graduate degree work	1633	100.0	34.2	41.8	24.0
Ph. D. recipient	321	100.0	40.2	43.9	15.9
Candidate for academic degree	335	100.0	41.2	42.4	16.4
Professional degree recipient or candidate	179	100.0	38.5	43.6	17.9
Recipient of second Master's degree	53	100.0	39.6	43.4	17.0
Recipient of second degree and candidate for third	24	100.0	41.7	50.0	8.3
Total Women[a]	921	100.0	29.2	45.4	25.4
No additional graduate degree work	773	99.9	28.8	44.7	26.4
Ph. D. recipient	36	100.0	25.0	41.7	33.3
Candidate for academic degree	59	99.9	30.5	49.1	20.3
Professional degree recipient or candidate	39	100.0	38.5	53.8	7.7
Recipient of second Master's degree	10	*			
Recipient of second degree and candidate for third	4	*			

[a] Doesn't apply and no answer omitted: Men-1161, Women-815.

*Too few cases to compute per cent.

How important do your parents think it is for you to study for an advanced degree?

1. Very important.
2. Somewhat important.
3. Not important.

F. Plans for Future Studies

Twenty-five per cent of the respondents--many of whom had not been involved in graduate work between 1958 and 1963--expected to begin work on one or more advanced academic or professional degrees in the future (see Table 48). In most cases this was the Ph. D. For those who had received the master of education degree in 1958, the expected goal was a doctorate in education.

Women were just as likely as men to express study intentions--especially those in the natural sciences--and showed considerable interest in seeking a Ph. D. in future years. But for many of these men--and especially for most of the women--achievement of these enrollment goals is put off into the far future. As shown in Table 49, many respondents refused to pin down a date at all. Those who did most often expressed the intention of beginning further graduate work in 1964 and 1965. The majority of men hoped to obtain a degree by 1968; women were less optimistic and either gave themselves more time or left this question unanswered. Approximately 40 per cent of the expected additional graduate work is to be done in the field of education.

Even if we allow for some wishful thinking or lip-service to the cause of higher education, there can be little doubt that the graduate careers of these master's degree recipients are far from complete. Among the men and women still in candidate status, many can be expected, sooner or later, to obtain the degree. And among those who have not yet started on further graduate work there are undoubtedly some future degree recipients, certainly in the field of education but probably in other fields as well.

TABLE 48M

EXPECTATION OF BEGINNING WORK ON AN ADVANCED DEGREE SOMETIME IN THE FUTURE BY 1958 GRADUATE FIELD

Field of 1958 Master's Degree	Total		Expected Future Degree								
	N	%	None	M. A.	Ph. D.	Ed. D.	Law	Divinity Degree	Other	Degree Un-Known	NA
Total Men	3706	100.1	74.3	3.2	9.3	6.6	0.2	0.2	0.8	1.1	4.4
Natural science	549	100.0	82.7	1.6	8.9	0.5	0.2	-	0.2	1.5	4.4
Engineering	570	100.1	81.0	3.0	11.1	0.2	0.2	-	0.4	0.9	3.3
Social science	393	100.1	74.8	1.3	15.8	2.0	0.3	0.3	-	1.5	4.1
Humanities and Arts	314	99.9	68.1	2.9	14.0	3.5	-	1.6	1.9	1.9	6.0
Health	60	100.1	86.7	-	10.0	-	-	-	-	1.7	1.7
Agriculture	77	100.0	84.4	-	9.1	-	-	-	-	-	6.5
Business and commerce	505	100.0	86.3	1.2	5.5	1.2	0.6	-	0.8	0.8	3.6
Education	1116	99.9	61.9	6.0	5.8	18.8	-	-	1.5	0.8	5.1
Other fields	122	100.0	70.5	4.1	18.0	3.3	0.8	-	-	-	3.3

TABLE 48W

EXPECTATION OF BEGINNING WORK ON AN ADVANCED DEGREE SOMETIME IN THE FUTURE BY 1958 GRADUATE FIELD

Field of 1958 Master's Degree	Total		Expected Future Degree								
	N	%	None	M. A.	Ph. D.	Ed. D.	Law	Divinity Degree	Other	Degree Un-Known	NA
Total Women	1736	99.9	73.5	2.8	7.3	5.0	0.4	0.1	1.0	2.1	7.7
Natural science	96	99.8	68.7	1.0	19.8	1.0	-	-	1.0	1.0	7.3
Engineering	1	*									
Social science	154	99.8	64.9	1.9	13.6	3.9	-	-	0.6	2.6	12.3
Humanities and Arts	225	99.7	76.0	2.7	8.4	2.2	0.4	0.8	0.8	0.8	7.6
Health	64	99.9	78.1	-	3.1	10.9	-	-	-	4.7	3.1
Home economics	61	100.0	77.0	-	11.5	4.9	-	-	-	3.3	3.3
Education	961	99.9	72.4	3.3	5.2	6.5	0.6	-	1.1	2.3	8.5
Other fields	174	99.9	83.3	3.4	5.2	1.7	-	-	1.7	1.7	2.9

*Too few cases to compute per cent.

TABLE 49M

YEAR OF EXPECTED ADDITIONAL GRADUATE DEGREE ENROLLMENT

Expected Graduate Field	Expected Graduate Degree Enrollment		YEAR									
	N	%	64	65	66	67	68	69	70	71	72+	NA
Total Men	789	100.1	40.1	22.2	4.6	1.1	2.3	0.6	1.0	-	-	28.1
Natural science	94	100.1	56.4	22.3	-	3.2	1.1	1.1	-	-	-	16.0
Engineering	64	100.0	45.3	17.2	9.4	3.1	1.6	-	-	-	-	23.4
Social science	114	100.1	50.9	14.9	8.8	-	0.9	-	0.9	-	-	23.7
Humanities and arts	85	100.1	41.2	24.7	5.9	-	1.2	-	1.2	-	-	25.9
Health	3	*										
Agriculture	2	*										
Business and commerce	37	99.9	35.1	16.2	2.7	-	10.8	10.8	-	-	-	24.3
Education	290	100.1	31.4	30.7	2.8	-	2.4	-	2.1	-	-	30.7
Other fields	48	99.8	43.7	14.6	8.3	8.3	6.2	-	-	-	-	18.7
No answer	52	99.9	25.0	3.8	1.9	-	-	-	-	-	-	69.2

*Too few cases to compute per cent.

TABLE 49W

YEAR OF EXPECTED ADDITIONAL GRADUATE DEGREE ENROLLMENT

Expected Graduate Field	Expected Graduate Degree Enrollment		Year									
	N	%	64	65	66	67	68	69	70	71	72+	NA
Total Women	326	99.9	28.8	15.6	2.5	5.2	2.1	0.6	4.3	-	0.9	39.9
Natural science	26	99.8	19.2	7.7	-	3.8	-	3.8	26.9	-	3.8	34.6
Social science	33	100.0	15.2	21.2	15.2	3.0	3.0	-	-	-	3.0	39.4
Humanities and arts	31	99.9	41.9	16.1	3.2	3.2	-	-	3.2	-	-	32.3
Health	9	*										
Home economics	8	*										
Education	131	100.0	37.4	19.1	-	9.9	-	-	3.8	-	-	29.8
Other fields	44	100.0	15.9	11.4	4.5	2.3	13.6	-	2.3	-	-	50.0
No answer	44	100.1	20.5	9.1	-	-	-	2.3	-	-	2.3	65.9

*Too few cases to compute per cent.

IV. CONCLUSION: THE CHANGING EDUCATION SCENE

Two dominant impressions emerge from the examination of the data presented in this report. One is the tremendous amount of educational activity past the bachelor's degree, in which very large numbers of men and a considerable number of women participate. There is much course-taking, much degree enrollment, and a modest amount of degree completion. The second is the unpatterned, helter-skelter way in which much of this education takes place. For most students the process is slow, discontinuous, seemingly wasteful.

This finding is not news to educators, who have long complained about the wasteful nature of our system of graduate education. What is more surprising is the finding--as it emerges from this study--that for many students this is apparently not an overly disturbing state of affairs. While there is some feeling that more financial aid would be helpful in speeding up the study process, the data presented here do not suggest that the situation is a desperate one. This is not to say that if more aid were available, some students might not progress faster or enroll sooner. But it seemed in balance that relatively few students find themselves forced to abandon their plans because their grant applications were turned down; rather, one gains the feeling that while it would be good to get through school faster, it is not really too uncomfortable to combine some work, a grown-up family life and part-time or "on again-off again" study. In fact, in terms of life style, this may be preferable to the regular, aided graduate student status which seldom provides a really comfortable living, and perhaps more important, subjects the student to greater academic control and discipline.

It is our feeling after looking at innumerable questionnaires that perhaps we did not design many of our questions in the graduate education section of the questionnaire so as to develop an accurate classification system for people in the graduate education process. It finally occurred to us that our thinking in planning questions suffered from the injection of an overdose of logic and our attempts to superimpose a consistent framework on what is essentially a fairly chaotic and ever-changing situation. Perhaps mesmerized by years of looking at neatly arranged statistics of college enrollments and degrees received, we failed to perceive the reality behind these statistics: the degree-changer, the dual degree seeker, the candidate who drops one candidacy only to seek another, the degree recipient who is already again seeking another degree. Our stereotypes die hard: we continue to think of the B. A. holder, off to full-time graduate school in the fall following graduation, enrolled for the M. A., then for the Ph. D., getting some financial aid along the way, perhaps getting married at some point, and finally ready to get the degree, held up perhaps by thesis difficulties or the selfishness of professors who exploit his services. This student exists, of course, and perhaps even predominates in some universities and departments. He is found most often in the natural sciences where the combination of early commitment to the field and the availability of funds for financial support produces somewhat more regular study patterns. But side by side with what we think of as the typical graduate student we find the student who is much harder to classify, whose academic activities and study patterns are more erratic, whose final degree is far from determined, but who is very much in the picture, who is getting considerable exposure and training, and for whom the universities are performing an important function. One cannot ignore these "deviant" graduate students because in many fields they probably outnumber those who fit what is generally thought to be the norm.

Similarly, it would appear that the continuing slow pace of degree completion--despite exhortations and increased financial assistance--represents a basic adaptation to the study situation which it may be unwise to reform. As students of the campus scene have often pointed out graduate study has become a comfortable and financially adequate way of life for many young marrieds, especially in the natural and social sciences. In other cases, however, there may be a positive quality in the longer but less intensive exposure to the university at a time of rapid technological and social change, when keeping in touch with one's field is an essential ingredient of continued professional competence. There is also no doubt that at least among the educated, the concept of continuing education--and the consequent willingness to engage in studies without concern for the traditionally appropriate age and family roles--have made tremendous inroads. The intentions expressed by the 1958 graduates--both bachelor's and master's degree holders--for later study starts are very revealing, not primarily as a precise predictor of future enrollments but as indicators of a state of mind which has fully accepted the concept of a lifetime of work-study continuity and interchangeability.

The erratic pattern is considerably more prevalent among the portion of the population oriented toward the "academic" degrees (Master of Arts, Ph. D.) than among those seeking the more job-oriented, professional degrees. The data indicate that the professional schools and departments do a much more "efficient"--at least in terms of speed and continuity--job of supplying manpower to their respective professions and, it might be noted, with considerably less direct financial aid to the student.

Although this system, with its slow pace of academic completion, may adequately serve its traditional function of supplying teaching manpower to the university, it no doubt serves the research needs of government and private industry far less well than it might. Thus, the degree-granting institutions are clearly experiencing a variety of cross-pressures for more rapid degree completion on the one hand and for more flexible arrangements for part-time or "continuing" students on the other.

It is certainly no easy task for universities to adapt their procedures and standards to the mass onslaught to which they are currently subject, and to satisfy the diversity of demands at the same time. At present there seems to be a stalemate between the pressure exerted by many institutions and employers for highly trained professionals, by students for new forms of academic arrangements, and by the reluctance of universities to make basic changes in their traditional structures. But judging from the behavior and plans of the class of 1958, the need for new approaches will become greater with every passing year.

APPENDIX A

[illegible]

DEGREE ENROLLMENT, RECIPIENCE, AND CURRENT CANDIDACY IN GRADUATE OR PROFESSIONAL SCHOOL SINCE 1958

Undergraduate Major	Total			Per cent Men	
	In Sample N	Degree Enrolled Since 1958[a] N	Degree Enrolled Since 1958[a] %	Degree Recipients	Current Degree Candidates
Total	16293	6672	41.0	28.4	17.2
Natural Science	2607	1564	60.0	46.4	21.4
Biological science	689	476	69.0	55.7	21.6
Premedicine	305	253	83.0	77.4	8.9
Chemistry	562	327	58.2	45.4	20.6
Earth science	245	89	36.3	26.9	18.8
Physics	252	157	62.3	38.5	37.7
Other physical science	103	54	52.4	31.1	26.2
Mathematics	451	208	45.9	30.9	21.4
Engineering	3128	965	30.9	18.6	17.8
Chemical	258	116	45.2	32.7	19.9
Civil	429	97	22.7	15.9	9.8
Electrical	827	309	37.1	22.1	20.6
Industrial	342	82	24.1	11.2	13.5
Mechanical	834	232	27.9	15.0	15.9
Mining	136	39	28.7	16.2	16.2
Other	302	90	29.8	20.5	14.6
Social science	3070	1595	52.0	38.1	19.5
Economics	677	228	33.5	24.7	12.0
History	736	450	61.0	45.0	23.2
Political science	435	250	57.4	42.9	20.5
Psychology	395	241	61.0	45.8	23.6
Sociology and anthropology	263	136	51.6	39.9	16.3
Other social science	564	290	51.4	34.6	21.6
Humanities and arts	1743	929	53.3	39.0	21.5
English and journalism	734	396	54.0	39.0	24.0
Fine arts	505	220	43.6	30.5	18.6
Foreign language	135	80	59.2	42.2	31.1
Philosophy	219	147	67.1	55.2	20.6
Religion	150	86	57.3	40.6	18.0
Health	302	53	17.5	13.9	5.3
Pharmacy	258	31	12.1	10.5	3.2
Other	44	22	50.0	34.1	18.2
Agriculture	456	143	31.5	24.2	12.3
Business and commerce	3287	568	17.3	10.2	8.0
Education	1612	807	50.0	28.2	24.8
General	88	48	54.5	37.5	23.8

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[a] The per cent of degree recipients and the per cent of current degree candidates is greater than the per cent of degree enrolled graduates because some graduates are included twice. For instance, an M.S. recipient and current candidate for a Ph. D. is counted in both the degree recipient category and the current degree candidate category.

APPENDIX TABLE AIW

DEGREE ENROLLMENT, RECIPIENCE, AND CURRENT CANDIDACY IN GRADUATE OR PROFESSIONAL SCHOOL SINCE 1958

Undergraduate Major	Total			Per Cent Women	
	In Sample	Degree Enrolled Since 1958[a]		Degree Recipients	Current Degree Candidates
	N	N	%		
Total	9290	2051	22.1	13.4	10.0
Natural science	803	235	29.3	22.5	10.0
Biological science	322	93	28.9	21.5	10.8
Premedicine	30	15	50.0	46.7	10.0
Chemistry	156	40	25.7	21.8	7.1
Earth science	17	2	11.8	11.8	-
Physics	17	8	47.1	47.1	11.8
Other physical science	27	5	18.5	14.8	7.4
Mathematics	234	72	30.7	21.3	11.5
Engineering	45	11	24.4	15.5	11.1
Social science	1417	397	28.0	18.3	12.0
Economics	83	19	22.8	13.2	14.4
History	320	112	34.9	23.1	15.2
Political science	138	41	29.6	20.2	13.0
Psychology	274	77	27.4	17.9	12.8
Sociology and anthropoloty	307	71	23.1	16.6	17.5
Other social science	295	77	26.1	15.9	11.2
Humanities and arts	2014	529	26.3	16.5	11.9
English and journalism	1001	264	26.4	16.0	12.3
Fine arts	631	143	22.6	15.0	10.0
Foreign language	243	78	32.0	20.1	14.4
Philosophy	31	7	22.7	13.0	16.2
Religion	108	37	34.3	23.1	12.1
Health	676	97	14.3	9.3	5.6
Nursing	470	83	17.7	12.0	6.6
Other	206	14	6.8	3.4	3.4
Home economics	574	82	14.2	8.3	6.2
Education	3239	632	19.5	9.5	10.3
Business and commerce	478	58	12.1	8.1	4.0
Other fields	44	10	22.8	11.4	11.4

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[a] The per cent of degree recipients and the per cent of current degree candidates is greater than the per cent of degree enrolled graduates because some graduates are included twice. For instance, an M.A. recipient and current candidate for a Ph. D. is counted in both the degree recipient category and the current degree candidate category.

APPENDIX TABLE A2M

BACHELOR DEGREE RECIPIENTS, NEVER DEGREE ENROLLED BETWEEN 1958 AND 1963 BY FIELD OF UNDERGRADUATE STUDY

Undergraduate Major	Total Men		Per Cent Men					
			Graduate School Status					
	N	%	Never Sought Admission	Sought Admission Courses	Failed to Enroll as Degree Student	Enrolled for Courses	Application Rejected	NA
Total	9621	100.0	59.5	11.5	4.1	4.3	2.2	18.4
Natural Science	1043	100.0	46.6	12.5	4.9	5.8	2.9	27.3
Biology	213	100.0	39.4	14.1	5.2	3.8	2.3	35.2
Premedicine	52	100.0	34.6	7.7	3.8	5.8	1.9	46.2
Chemistry	235	100.1	49.4	11.5	6.8	5.5	6.0	20.9
Earth science	156	100.0	60.3	8.3	3.8	6.4	1.3	19.9
Physics	95	100.0	42.1	12.6	5.3	8.4	3.2	28.4
Other physical sciences	49	99.9	51.0	20.4	2.0	2.0	-	24.5
Mathematics	243	100.1	44.9	14.0	4.1	7.4	2.1	27.6
Engineering	2163	100.0	62.3	12.4	3.5	5.0	2.6	14.2
Chemical	142	100.0	64.1	12.0	2.8	2.8	1.4	16.9
Civil	332	99.9	70.8	11.4	2.7	4.2	2.4	8.4
Electrical	518	100.1	49.6	14.3	3.1	9.7	3.5	19.9
Industrial	260	99.9	69.6	9.6	3.8	2.7	1.5	12.7
Mechanical	602	100.0	60.1	14.8	3.3	4.8	3.0	14.0
Mining	97	100.1	67.0	12.4	5.2	2.1	3.1	10.3
Other	212	100.0	73.6	6.6	5.2	0.9	1.9	11.8

Page 2 - Appendix Table A2M--Continued

Undergraduate Major	Total Men		Per Cent Men					
			Graduate School Status					
	N	%	Never Sought Admission	Sought Admission Courses	Failed to Enroll as Degree Student	Enrolled for Courses	Application Rejected	NA
Social Science	1475	99.9	50.0	12.2	5.4	3.9	2.6	25.8
Economics	449	100.0	61.5	10.7	4.7	2.9	2.2	18.0
History	286	100.0	42.0	12.9	5.9	4.2	2.8	32.2
Political science	185	100.0	50.8	11.4	4.9	3.8	0.5	28.6
Psychology	154	99.9	53.2	11.0	3.9	5.2	3.2	23.4
Sociology and anthropology	127	100.0	46.5	9.4	8.7	2.4	4.7	28.3
Other social sciences	274	100.0	39.1	16.4	5.8	5.5	3.3	29.9
Humanities and Arts	814	100.0	47.9	14.3	4.2	5.0	2.8	25.8
English and journalism	338	100.0	50.3	12.1	5.3	4.4	3.3	24.6
Fine arts	285	100.0	47.7	16.8	3.5	4.6	2.8	24.6
Foreign language	55	100.0	32.7	18.2	3.6	5.5	5.5	34.5
Philosophy	72	99.9	33.3	19.4	4.2	8.3	1.4	33.3
Religion	64	100.0	65.6	4.7	1.6	6.2	-	21.9
Health	249	99.9	73.9	5.6	4.8	2.0	2.0	11.6
Pharmacy	227	100.0	75.8	4.8	5.3	1.3	1.8	11.0
Other health	22	99.9	54.5	13.6	-	9.1	4.5	18.2
Agriculture	313	100.0	68.4	7.0	3.5	2.9	1.3	16.9
Business and commerce	2719	99.9	75.4	7.3	3.5	3.6	1.3	8.8
Education	805	100.1	37.8	20.7	4.7	3.9	1.9	31.1
General	40	100.0	40.0	20.0	2.5	2.5	2.5	32.5

APPENDIX TABLE A2W

BACHELOR DEGREE RECIPIENTS, NEVER DEGREE ENROLLED BETWEEN 1958 AND 1963 BY FIELD OF UNDERGRADUATE STUDY

Undergraduate Major	Total Women		Per Cent Women					
			Graduate School Status					
	N	%	Never Sought Admission	Sought Admission Courses	Failed to Enroll as Degree Student	Enrolled for Courses	Application Rejected	NA
Total	7239	100.1	57.5	16.9	3.0	5.5	0.7	16.5
Natural Science	568	100.0	50.7	18.5	4.6	5.6	0.9	19.7
Biology	229	100.1	52.0	19.2	4.4	2.2	0.9	21.4
Premedicine	15	100.0	40.0	13.3	6.7	13.3	6.7	20.0
Chemistry	116	100.1	48.3	19.0	5.2	10.3	0.9	16.4
Earth science	15	100.1	40.0	26.7	6.7	-	-	26.7
Physics	9	*						
Other physical sciences	22	99.9	63.6	13.6	9.1	4.5	-	9.1
Mathematics	162	100.0	51.9	17.9	3.7	7.4	0.6	18.5
Engineering	34	100.0	44.1	14.7	-	5.9	2.9	32.4
Social Science	1020	100.0	52.9	16.0	4.3	5.5	0.4	20.9
Economics	64	100.0	57.8	7.8	4.7	3.1	1.6	25.0
History	208	100.1	51.0	15.9	2.4	8.7	-	22.1
Political science	97	100.0	56.7	14.4	5.2	3.1	1.0	19.6
Psychology	197	100.0	52.3	20.3	4.6	2.0	0.5	20.3
Sociology and anthropology	236	100.0	57.2	13.6	3.8	6.4	0.4	18.6
Other Social Sciences	218	100.0	47.7	17.9	6.0	6.4	-	22.0
Humanities and Arts	1485	100.0	53.7	17.0	4.0	6.1	0.7	18.5
English and journalism	737	100.0	53.6	16.3	6.0	5.4	0.5	18.2
Fine arts	488	99.9	54.3	18.0	1.6	6.8	0.6	18.6

Page 2 - Appendix Table A2W--Continued

Undergraduate Major	Total Women		Per Cent Women					
			Graduate School Status					
	N	%	Never Sought Admission	Sought Admission Courses	Failed to Enroll as Degree Student	Enrolled for Courses	Application Rejected	NA
Foreign language	165	100.0	47.3	18.2	2.4	9.7	1.2	21.2
Philosophy	24	100.0	50.0	12.5	8.3	-	-	29.2
Religion	71	100.0	67.6	16.9	1.4	2.8	1.4	9.9
Health	579	100.0	69.8	10.7	2.2	3.5	0.5	13.3
Nursing	387	100.0	65.4	12.7	2.8	3.6	0.8	14.7
Other health	192	99.9	78.6	6.8	1.0	3.1	-	10.4
Business and commerce	420	100.0	70.0	8.8	0.5	3.1	0.2	17.4
Education	2607	99.9	57.1	19.5	2.1	5.8	1.0	14.4
Home economics	492	99.9	65.4	14.0	3.0	6.1	0.2	11.2
Other fields	34	99.9	29.4	38.2	-	14.7	-	17.6

*Too few cases to compute per cent.

APPENDIX TABLE [illegible]

PATTERN OF GRADUATE STUDY (ALL DEGREE ENROLLED, B. A. RECIPIENTS)

Undergraduate Field	Total Degree Enrolled Men		Per Cent Men				
	N	%	Full-time	Alter-nated	Part-time	Discon-tinued [a]	NA
Total	6672	100.1	50.9	10.2	32.6	4.5	1.9
Natural Science	1564	100.1	69.2	6.7	20.1	2.9	1.2
Biological science	467	100.0	77.5	6.9	12.4	1.7	1.5
Premedicine	253	100.1	93.3	1.2	3.2	1.2	1.2
Chemistry	327	100.0	72.5	4.6	19.9	1.5	1.5
Earth science	89	100.0	66.3	9.0	23.6	1.1	-
Physics	157	100.0	45.2	9.6	38.9	5.7	0.6
Other physical sciences	54	100.1	48.1	9.3	31.5	9.3	1.9
Mathematics	208	100.0	40.4	12.5	39.9	6.7	0.5
Engineering	965	100.0	37.0	4.1	51.6	5.7	1.6
Chemical	116	99.9	56.0	1.7	35.3	5.2	1.7
Civil	97	100.1	45.4	2.1	48.5	3.1	1.0
Electrical	309	100.0	28.2	5.8	58.6	6.1	1.3
Industrial	82	100.0	32.9	4.9	47.6	12.2	2.4
Mechanical	232	100.0	34.5	4.3	55.6	4.7	0.9
Mining	39	100.1	43.6	2.6	43.6	7.7	2.6
Other	90	99.9	41.1	3.3	48.9	3.3	3.3
Social Science	1595	100.0	55.7	11.1	27.6	3.7	1.9
Economics	228	100.0	57.5	10.1	26.3	2.2	3.9
History	450	100.1	56.0	13.6	26.7	3.1	0.7
Political science	250	100.0	67.2	6.0	21.6	3.2	2.0
Psychology	241	100.0	55.6	8.7	29.9	4.6	1.2
Sociology and anthropology	136	99.9	62.5	8.8	23.5	2.9	2.2
Other social sciences	290	100.1	40.7	15.5	35.2	5.9	2.8
Humanities and Arts	929	100.1	54.6	15.2	23.9	5.1	1.3
English and journalism	396	100.0	55.3	12.6	24.2	7.1	0.8
Fine arts	220	100.0	41.4	20.0	30.5	4.5	3.6
Foreign language	80	99.8	51.2	20.0	23.7	3.7	1.2
Philosophy	147	100.1	73.5	11.6	13.6	1.4	-
Religion	86	100.1	55.8	16.3	23.3	4.7	-
Health Fields	53	100.0	75.4	[illegible]	15.1	3.8	-
Pharmacy	31	100.0	87.1	3.2	6.5	3.2	-
Other health	22	100.0	59.1	9.1	27.3	4.5	-
Education	807	100.0	17.2	19.0	54.6	6.1	3.1
Business and commerce	568	100.1	47.9	7.4	34.2	6.9	3.7
Agriculture	143	100.0	56.6	4.9	35.0	0.7	2.8
General	48	100.0	60.4	20.8	14.6	4.2	-

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[a] Respondents who enrolled for a degree which they did not obtain and which they are not working on at present, but who subsequently enrolled for or earned an entirely different degree.

APPENDIX TABLE A3W

PATTERN OF GRADUATE STUDY (ALL DEGREE ENROLLED, B. A. RECIPIENTS)

Undergraduate Field	Total Degree Enrolled Women		Per Cent Women				
	N	%	Full-time	Alter-nated	Part-time	Discon-tinued[a]	NA
Total	2051	99.9	31.8	16.4	40.3	8.4	3.0
Natural Science	235	100.0	50.2	9.4	32.8	5.5	2.1
Biological science	93	100.0	50.5	10.8	33.3	5.4	-
Premedicine	15	100.0	73.3	-	20.0	6.7	-
Chemistry	40	100.0	60.0	2.5	30.0	5.0	2.5
Earth science	2	*					
Physics	8	*					
Other physical sciences	5	*					
Mathematics	72	100.0	38.9	11.1	37.5	6.9	5.6
Engineering	11	100.0	36.4	-	54.5	9.1	-
Social Science	397	99.8	41.0	15.6	34.2	6.5	2.5
Economics	19	100.0	26.3	26.3	31.6	10.5	5.3
History	112	100.1	32.1	17.9	42.9	4.5	2.7
Political science	41	100.1	48.8	17.1	22.0	9.8	2.4
Psychology	77	100.1	46.8	13.0	31.2	7.8	1.3
Sociology and anthropology	71	100.0	53.5	9.9	26.8	7.0	2.8
Other social sciences	77	100.1	36.4	16.9	39.0	5.2	2.6
Humanities and Arts	529	99.9	34.6	15.5	38.9	8.1	2.8
English and journalism	264	100.0	27.7	12.1	46.6	10.6	3.0
Fine arts	143	100.1	42.7	22.4	27.3	6.3	1.4
Foreign language	78	99.9	42.3	14.1	35.9	3.8	3.8
Philosophy	7	100.0	14.3	57.1	14.3	14.3	-
Religion	37	99.9	40.5	8.1	40.5	5.4	5.4
Health Fields	97	99.9	50.5	4.1	38.1	6.2	1.0
Nursing	83	99.9	55.4	4.8	32.5	7.2	-
Other health	14	99.9	21.4	-	71.4	-	7.1
Business and commerce	58	99.8	17.2	24.1	51.7	3.4	3.4
Education	632	100.1	16.5	21.7	45.9	11.4	4.6
Home economics	82	100.0	25.6	15.9	50.0	8.5	-
Other Fields	10	*					

[a] Respondents who enrolled for a degree which they did not obtain and which they are not working on at present, but who subsequently enrolled for or earned an entirely different degree.

*Too few cases to compute per cent.

APPENDIX TABLE A4M

PATTERN OF GRADUATE STUDY

Graduate Field	Total Degree Enrolled Men		Per Cent Men				
	N	%	Full-time	Alter-nated	Part-time	Discon-tinued[a]	NA
Total	6672	100.1	50.9	10.2	32.6	4.5	1.9
Natural Science	772	99.9	58.3	8.4	28.4	4.5	0.3
Biological science	223	99.9	65.9	7.2	24.2	2.2	0.4
Chemistry	159	100.0	69.2	5.7	21.4	3.1	0.6
Earth science	66	100.0	68.2	6.1	21.2	4.5	-
Physics	128	99.9	43.7	7.0	40.6	8.6	-
Other physical sciences	26	100.0	42.3	19.2	38.5	-	-
Mathematics	170	100.0	48.8	12.9	31.8	6.5	-
Engineering	628	100.0	36.8	3.8	53.7	5.4	0.3
Chemical	57	100.0	64.9	-	33.3	1.8	-
Civil	57	100.1	47.4	3.5	43.9	5.3	-
Electrical	226	100.0	27.4	4.9	61.5	5.8	0.4
Industrial	55	100.1	49.1	5.5	36.4	7.3	1.8
Mechanical	117	100.0	33.3	4.3	56.4	6.0	-
Mining	31	100.0	45.2	-	51.6	3.2	-
Other	85	100.0	29.4	3.5	61.2	5.9	-
Social Science	488	99.9	42.6	17.6	34.6	4.5	0.6
Economics	76	100.1	38.2	13.2	47.4	1.3	-
History	146	99.9	40.4	24.0	30.1	4.1	1.4
Political science	76	100.0	43.4	7.9	42.1	5.3	1.3
Psychology	109	100.0	54.1	13.8	25.7	6.4	-
Sociology and anthropology	40	100.0	40.0	17.5	42.5	-	-
Other social sciences	41	100.1	29.3	31.7	29.3	9.8	-
Humanities and Arts	781	100.0	62.9	14.2	16.6	5.9	0.4
English and journalism	161	100.0	39.8	18.0	32.3	9.9	-
Fine arts	138	100.0	48.6	18.1	22.5	9.4	1.4
Foreign language	54	100.2	55.6	24.1	9.3	9.3	1.9
Philosophy	23	99.9	39.1	30.4	26.1	4.3	-
Religion	405	100.0	79.3	9.1	8.9	2.7	-
Health	699	99.9	97.4	1.1	1.1	0.3	-
Agriculture	76	99.9	60.5	7.9	28.9	2.6	-
Business and commerce	530	100.0	42.5	5.8	40.0	10.4	1.3
Education	1294	99.9	17.0	18.6	58.1	5.3	0.9
Other fields	772	100.0	77.7	4.5	16.6	0.9	0.3
Graduate field unknown	632	99.9	38.1	11.2	31.3	4.3	15.0

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[a] Respondents who enrolled for a degree which they did not obtain and which they are not working on at present, but who subsequently enrolled for or earned an entirely different degree.

APPENDIX TABLE A4W

PATTERN OF GRADUATE STUDY

Graduate Field	Total Degree Enrolled Women		Per Cent Women				
	N	%	Full-time	Alter-nated	Part-time	Discon-tinued[a]	NA
Total	2051	99.9	31.8	16.4	40.3	8.4	3.0
Natural Science	137	99.9	45.3	15.3	32.8	5.8	0.7
Biological science	61	100.0	44.3	18.0	29.5	6.6.	1.6
Chemistry	21	100.0	66.7	9.5	23.8	-	-
Earth science	2	*					
Physics	6	*					
Other physical sciences	1	*					
Mathematics	46	100.0	39.1	15.2	37.0	8.7	-
Social Science	150	100.0	34.0	20.0	38.7	7.3	-
Economics	3*						
History	59	99.9	23.7	16.9	52.5	6.8	-
Political science	13	100.1	38.5	30.8	15.4	15.4	-
Psychology	42	100.0	40.5	26.2	23.8	9.5	-
Sociology and anthropology	19	100.0	57.9	10.5	26.3	5.3	-
Other social sciences	14	100.0	14.3	21.4	64.3	-	-
Humanities and Arts	301	100.0	49.2	14.9	27.2	6.0	2.7
English and journalism	91	100.1	34.1	1.1	44.0	15.4	5.5
Fine arts	119	100.0	52.1	27.7	20.2	-	-
Foreign language	44	100.0	50.0	18.2	25.0	4.5	2.3
Philosophy	3					-	
Religion	44	99.8	72.7	4.5	13.6	4.5	4.5
Health Fields	119	100.0	66.4	3.4	16.8	13.4	-
Nursing	69	99.9	65.2	4.3	24.6	5.8	-
Other health	50	100.0	68.0	2.0	6.0	24.0	-
Education	925	99.9	16.2	19.1	53.5	9.8	1.3
Home economics	45	99.9	48.9	13.3	33.3	4.4	-
Other fields	203	100.0	50.2	13.3	27.6	7.9	1.0
Graduate field unknown	171	99.9	22.8	15.2	32.7	6.4	22.8

*Too few cases to compute per cent.

[a] Respondents who enrolled for a degree which they did not obtain and which they are not working on at present, but who subsequently enrolled for or earned an entirely different degree.

APPENDIX TABLE A5M

REASON FOR PART-TIME GRADUATE STUDY BY UNDERGRADUATE MAJOR-MEN

Undergraduate Major	Total		Financial Loss	Scholarship Terminated	Poor Grades	Moved Away	Undecided Field	Military Service	Work Thesis	Time Family	Job Experience	Good Job, No Study	Tired Student	Poor Investment	No Answer
	N	%													
Total[a]	2174	100.2	63.8	0.8	0.6	1.5	1.0	2.1	3.3	1.7	7.6	2.9	2.2	0.6	12.1
Natural Science	314	100.0	62.4	1.0	1.3	1.3	0.3	2.2	4.5	1.9	7.0	3.2	1.9	0.6	12.4
Engineering	498	99.9	67.3	0.6	0.8	0.4	1.2	2.2	3.0	1.6	9.4	2.8	3.4	0.6	6.6
Social Science	440	99.8	61.1	1.1	0.9	2.0	2.0	2.3	3.4	2.3	7.7	2.7	1.8	0.7	11.8
Humanities and Arts	222	100.1	61.3	1.8	-	0.9	2.3	0.9	5.4	4.5	11.7	0.9	2.7	-	7.7
Health	8	*													
Agriculture	50	100.0	66.0	2.0	-	-	-	6.0	4.0	-	12.0	-	-	-	10.0
Business and Commerce	194	99.9	63.9	-	-	-	-	3.6	7.2	-	3.6	-	3.6	-	18.0
Education	441	99.9	63.5	0.2	0.2	3.6	-	1.4	-	0.7	5.2	5.4	0.7	0.9	18.1
General	7	*													

[a] Respondents who studied part-time.

*Cases too few to compute per cent.

APPENDIX TABLE A5W

REASON FOR PART-TIME GRADUATE STUDY BY UNDERGRADUATE MAJOR-WOMEN

Undergraduate Major	Total		Financial Loss	Scholarship Terminated	Poor Grades	Moved Away	Undecided Field	Military Service	Work Thesis	Time Family	Job Experience	Good Job, No Study	Tired Student	Poor Investment	No Answer
	N	%													
Total[a]	827	99.9	47.6	0.7	0.1	2.4	1.5	1.7	1.7	10.6	11.4	3.5	2.9	-	15.8
Natural Science	77	100.1	46.8	1.3	1.3	5.2	-	1.3	3.9	7.8	11.7	5.2	-	-	15.6
Engineering	6	*													
Social Science	136	100.0	45.6	0.7	-	-	3.7	-	5.1	13.2	14.0	1.5	2.2	-	14.0
Humanities and Arts	206	100.0	57.3	1.0	-	-	1.9	1.9	1.0	12.6	10.7	1.5	5.3	-	6.8
Health	37	100.0	56.8	5.4	-	-	2.7	-	5.4	2.7	8.1	2.7	-	-	16.2
Business and Commerce	30	100.0	33.3	-	-	10.0	-	-	20.0	6.7	-	3.3	-	-	26.7
Education	290	100.0	43.1	-	-	3.1	-	3.1	10.7	11.4	5.5	2.8	-	-	20.3
Home Economics	41	100.0	51.2	-	-	9.8	-	-	-	-	12.2	4.9	2.4	-	19.5
Other	4	*													

[a] Respondents who studied part-time.

*Cases too few to compute per cent.

APPENDIX TABLE A5--Continued

Your most important reason for not studying continuously, full-time until you received the degree was:

1. Financial (loss of financial support from parents, spouse stopped working, could not afford to study full-time, etc.);

2. Scholarship, fellowship, or grant terminated;

3. Poor grades or progress; could not carry full-time continuous load;

4. Moved away from area where the university I was attending is located;

5. Undecided about field of study;

6. Military service interrupted my studies;

7. All course work completed; working on thesis;

8. Needed more time to devote to my family;

9. Anxious to acquire some job experience;

10. Could get a desirable job without further study;

11. Tired of being a student (or full-time student;

12. Decided it was a poor investment of time and money to seek a graduate degree.

APPENDIX TABLE A6M

REASON FOR ALTERNATE GRADUATE STUDY BY UNDERGRADUATE MAJOR-MEN

Undergraduate Major	Total N	Total %	Financial Loss	Scholarship Terminated	Poor Grades	Moved Away	Undecided Field	Military Service	Work Thesis	Time Family	Job Experience	Good Job, No Study	Tired Student	Poor Investment	No Answer
Total[a]	678	99.8	43.8	2.2	1.3	4.0	3.1	4.3	6.0	3.5	8.8	2.8	5.9	0.1	14.0
Natural Science	105	100.1	41.9	6.7	1.9	-	2.9	1.9	5.7	1.9	8.6	2.9	9.5	-	16.2
Engineering	40	100.0	35.0	-	5.0	2.5	-	12.5	5.0	10.0	5.0	2.5	10.0	-	12.5
Social Science	177	100.1	40.1	2.3	2.3	1.7	4.0	5.6	10.2	4.0	12.4	1.7	7.3	-	8.5
Humanities and Arts	141	99.8	41.1	2.8	-	7.8	0.7	2.8	7.1	1.4	12.1	3.5	3.5	-	17.0
Health	3	*													
Agriculture	7	*													
Business and Commerce	42	100.1	50.0	-	-	-	16.7	16.7	-	-	-	-	16.7	-	-
Education	153	100.1	52.9	-	-	7.2	2.0	-	-	5.9	5.9	3.9	0.7	0.7	20.9
General	10	*													

[a] Respondents who alternated study.

*Too few cases to compute per cent.

APPENDIX TABLE A6W

REASON FOR ALTERNATE GRADUATE STUDY BY UNDERGRADUATE MAJOR-WOMEN

Undergraduate Major	Total		Financial Loss	Scholarship Terminated	Poor Grades	Moved Away	Undecided Field	Military Service	Work Thesis	Time Family	Job Experience	Good Job, No Student	Tired Student	Poor Investment	No Answer
	N	%													
Total[a]	336	100.0	33.3	1.2	1.2	5.4	-	-	9.5	18.7	8.6	1.5	4.2	0.3	16.1
Natural Science	22	99.7	31.8	4.5	-	4.5	-	-	4.5	13.6	13.6	4.5	4.5	-	18.2
Social Science	62	99.9	40.3	1.6	1.6	4.8	-	-	9.7	16.1	9.7	-	3.2	1.6	11.3
Humanities and Arts	82	99.9	25.6	1.2	-	4.9	-	-	8.5	25.6	12.2	2.4	11.0	-	8.5
Health	4	*													
Home Economics	13	100.1	30.8	-	23.1	-	-	-	7.7	-	7.7	-	15.4	-	15.4
Business and Commerce	14	99.8	35.7	-	-	7.1	-	-	-	35.7	7.1	7.1	-	-	7.1
Education	137	100.0	35.8	0.7	-	6.6	-	-	11.7	17.5	5.8	0.7	-	-	21.2
Other	2	*													

[a] Respondents who alternated study.

*Too few cases to compute per cent.

APPENDIX TABLE A6--Continued

Your most important reasons for not studying continuously, full-time until you received the degree was:

1. Financial (loss of financial support from parents, spouse stopped working could not afford to study full-time, etc.);

2. Scholarship, fellowship, or grant terminated;

3. Poor grades or progress; could not carry full-time continuous load;

4. Moved away from area where the university I was attending is located.;

5. Undecided about field of study;

6. Military service interrupted my studies;

7. All course work completed; working on thesis;

8. Needed more time to devote to my family;

9. Anxious to acquire some job experience.;

10. Could get a desirable job without further study;

11. Tired of being a student (or full-time student.);

12. Decided it was a poor investment of time and money to seek a graduate degree.

APPENDIX TABLE A7

GRADUATE OR PROFESSIONAL DEGREE RECIPIENTS: FIELD OF FIRST DEGREE RECEIVED AND FINANCIAL SUPPORT

Field of First Graduate Degree Received	Total Degree Recipients[a] Men		Per Cent Men Support		Total Degree Recipients[a] Women		Per Cent Women Support	
	N	%	Some or All	None[b]	N	%	Some or All	None[b]
Total	4559	100.0	32.4	67.6	1245	100.0	29.2	70.8
Natural Science	556	100.0	72.7	27.3	100	100.0	69.0	31.0
Biological science	173	100.0	74.0	26.0	42	100.0	76.2	23.8
Chemistry	124	100.0	85.5	14.5	17	100.0	82.4	17.6
Earth science	52	100.0	53.8	46.2	1	*	*	*
Physics	78	100.0	76.9	23.1	5	*	*	*
Other physical sciences	16	100.0	62.5	37.5	2	*	*	*
Mathematics	113	100.0	63.7	36.3	33	100.0	51.5	48.5
Engineering	453	100.0	47.5	52.5	-	-	-	-
Chemical	48	99.9	68.7	31.2	-	-	-	-
Civil	55	100.0	50.9	49.1	-	-	-	-
Electrical	160	99.9	43.7	56.2	-	-	-	-
Industrial	44	100.0	29.5	70.5	-	-	-	-
Mechanical	72	100.0	44.4	55.6	-	-	-	-
Mining	21	100.0	71.4	28.6	-	-	-	-
Other	53	100.0	45.3	54.7	-	-	-	-
Social Science	329	100.0	46.2	53.8	104	100.0	38.5	61.5
Economics	54	100.0	57.4	42.6	2	*	*	*
History	102	100.0	39.2	60.8	41	100.0	34.1	65.9
Political science	48	100.0	50.0	50.0	9	*	*	*
Psychology	80	100.0	45.0	55.0	24	100.0	54.2	45.8
Sociology and anthropology	21	100.0	47.6	52.4	14	100.0	28.6	71.4
Other social sciences	24	100.0	45.8	54.2	14	100.0	28.6	71.4
Humanities and Arts	633	100.0	30.6	69.4	213	100.0	61.0	39.0
English and journalism	104	100.0	33.7	66.3	62	100.0	56.5	43.5
Fine arts	102	100.0	46.1	53.9	96	100.0	28.1	71.9
Foreign language	42	100.0	76.2	23.8	26	100.0	42.3	57.7
Philosophy	24	100.0	54.2	45.8	2	*	*	*
Religion	361	100.0	18.6	81.4	27	100.0	29.6	70.4

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Field of First Graduate Degree Received	Total Degree Recipients[a] Men		Per Cent Men Support		Total Degree Recipients[a] Women		Per Cent Women Support	
	N	%	Some or All	None [b]	N	%	Some or All	None[b]
Health	659	100.0	17.0	83.0	95	100.0	52.6	47.4
Nursing	-	-	-	-	47	100.0	80.9	19.1
Other	-	-	-	-	48	100.0	25.0	75.0
Agriculture	88	100.0	72.7	27.3	-	-	-	-
Home economics	-	-	-	-	23	100.0	65.2	34.8
Business and commerce	321	100.0	15.9	84.1	-	-	-	-
Education	910	100.0	20.7	79.3	560	100.0	10.2	89.8
Other fields	610	100.0	15.7	84.3	150	100.0	33.3	66.7

[a] Excludes respondents who have not yet earned a degree as well as recipients of degrees in fields unknown.

[b] Includes non response to the question of support.

* Too few cases to compute per cent.

APPENDIX TABLE A8

FIELD OF GRADUATE DEGREE CANDIDACY AND FINANCIAL SUPPORT

Field of Candidacy	Total Degree Recipients[a] Men		Per Cent Men Support		Total Degree Recipients[a] Women		Per Cent Women Support	
	N	%	Some or All	None[b]	N	%	Some or All	None[b]
Total	2805	100.0	28.1	71.9	907	100.0	15.7	84.3
Natural Science	425	100.0	58.4	41.6	53	100.0	41.5	58.5
Biological science	132	100.0	65.9	34.1	24	100.0	54.2	45.8
Chemistry	59	100.0	78.0	22.0	8	*		
Earth science	33	100.0	48.5	51.5	1	*		
Physics	86	100.0	55.8	44.2	2	*		
Other physical sciences	13	100.0	61.5	38.5	-	-	-	-
Mathematics	102	100.0	42.2	57.8	18	100.0	16.7	83.3
Engineering	333	100.0	29.1	70.9	-	-	-	-
Chemical	21	100.0	38.1	61.9	-	-	-	-
Civil	22	100.0	45.5	54.5	-	-	-	-
Electrical	124	100.0	25.0	75.0	-	-	-	-
Industrial	28	100.0	14.3	85.7	-	-	-	-
Mechanial	65	100.0	21.5	78.5	-	-	-	-
Mining	17	100.0	35.3	64.7	-	-	-	-
Other	56	100.0	42.9	57.1	-	-	-	-
Social Science	312	100.0	41.3	58.7	75	100.0	37.3	62.7
Economics	47	100.0	42.6	57.4	2	*		
History	88	100.0	36.4	63.6	22	100.0	31.8	68.2
Political science	54	100.0	31.5	68.5	7	*		
Psychology	55	100.0	50.9	49.1	28	100.0	32.1	67.9
Sociology and anthropology	36	100.0	55.6	44.4	8	*		
Other social sciences	32	100.0	37.5	62.5	8	*		
Humanities and Arts	375	100.0	32.8	67.2	156	100.0	20.5	79.5
English and journalism	120	100.0	28.3	71.7	58	100.0	10.3	89.7
Fine arts	69	100.0	43.5	56.5	52	100.0	13.5	86.5
Foreign language	50	100.0	60.0	40.0	25	100.0	68.0	32.0
Philosophy	10	*			2	*		
Religion	126	100.0	20.6	79.4	19	100.0	5.3	94.7

Page 2 - Appendix Table A8--Continued

Field of Candidacy	Total Degree Recipients[a] Men		Per Cent Men Support		Total Degree Recipients[a] Women		Per Cent Women Support	
	N	%	Some or All	None[b]	N	%	Some or All	None[b]
Health	110	100.0	28.2	71.8	32	100.0	46.9	53.1
Nursing	-	-	-	-	23	100.0	52.2	47.8
Other	-	-	-	-	9	*		
Agriculture	28	100.0	28.6	71.4	-	-	-	-
Home economics	-	-	-	-	23	100.0	47.8	52.2
Business and commerce	294	100.0	11.2	88.8	-	-	-	-
Education	696	100.0	13.6	86.4	498	100.0	4.6	95.4
Other fields	232	100.0	10.3	89.7	70	100.0	15.7	84.3

[a] Excludes graduates who are no longer degree candidates as well as candidates for degrees in unknown fields.

[b] Includes non reponse to the question of support.

* Too few cases to compute per cent.

APPENDIX TABLE A9M

UNDERGRADUATE MAJOR AND GRANT ACCEPTANCE, APPLICATION, AND REJECTION

Undergraduate Major Field	Total		Per Cent Men				
	N	%	Grant Accepted	Granted, Not Accepted	Application Rejected	Did Not Apply	No Answer
Total Group	25583	100.0	20.4	1.1	2.7	72.4	3.4
Total Men	16293	99.9	24.6	1.0	3.2	67.8	3.3
Natural science	2607	100.0	45.3	0.8	4.2	46.3	3.4
Biological science	689	100.0	48.0	0.7	6.0	41.1	4.2
Premedicine	305	100.0	50.2	0.3	2.3	43.3	3.9
Chemistry	562	100.0	47.9	0.7	3.9	45.0	2.5
Earth science	245	100.0	32.2	0.4	2.9	62.9	1.6
Physics	252	100.1	52.4	1.6	2.8	40.9	2.4
Other physical sciences	103	100.0	45.6	-	3.9	46.6	3.9
Mathematics	451	100.0	37.7	1.3	4.7	51.9	4.4
Engineering	3128	99.9	18.7	1.0	1.6	76.5	2.1
Chemical	258	99.9	28.8	1.9	0.4	66.5	2.3
Civil	429	100.0	15.6	0.9	2.1	78.8	2.6
Electrical	827	100.1	22.4	1.1	2.3	73.2	1.1
Industrial	342	100.0	11.7	0.3	0.6	83.3	4.1
Mechanical	834	100.0	16.4	0.6	1.1	79.9	2.0
Mining	136	100.0	15.4	1.5	2.9	78.7	1.5
Other	302	100.0	20.5	1.7	2.3	73.5	2.0
Social Science	3070	100.0	29.2	1.1	3.9	62.2	3.6
Economics	677	99.9	16.4	0.6	1.6	77.8	3.5
History	736	100.0	33.4	1.0	3.9	58.7	3.0
Political science	435	100.0	32.2	1.1	4.4	58.6	3.7
Psychology	395	100.1	40.8	1.8	3.8	50.4	3.3
Sociology and anthropology	263	99.9	38.0	1.5	3.8	51.7	4.9
Other social sciences	564	100.0	24.1	1.2	6.6	64.2	3.9
Humanities and Arts	1743	100.0	33.8	1.3	4.1	57.1	3.7
English and journalism	734	100.0	34.9	1.1	4.5	54.9	4.6
Fine arts	505	100.0	25.5	1.2	4.4	66.1	2.8
Foreign language	135	100.0	45.2	3.0	3.7	43.7	4.4
Philosophy	219	100.0	47.0	0.9	4.1	45.7	2.3
Religion	150	99.9	27.3	1.3	1.3	66.7	3.3
Health	302	100.0	13.9	-	3.3	78.5	4.3
Pharmacy	258	100.1	10.1	-	3.5	81.8	4.7
Other	44	100.1	36.4	-	2.3	59.1	2.3
Agriculture	456	100.0	22.8	1.1	2.2	68.0	5.9
Business and commerce	3287	99.9	8.3	0.7	0.9	88.3	1.7
Education	1612	100.0	19.2	2.1	7.3	64.7	6.7
General	88	99.9	40.9	-	3.4	51.1	4.5

APPENDIX TABLE A9W

UNDERGRADUATE MAJOR AND GRANT ACCEPTANCE, APPLICATION, AND REJECTION

Undergraduate Major Field	Total		Per Cent Women				
	N	%	Grant Accepted	Granted, Not Accepted	Application Rejected	Did Not Apply	No Answer
Total Women	9290	100.0	13.0	1.1	1.8	80.6	3.5
Natural Science	803	100.0	27.3	2.6	2.7	64.9	2.5
Biological sciences	322	100.1	26.7	2.2	2.8	66.5	1.9
Premedicine	30	99.9	33.3	-	3.3	60.0	3.3
Chemistry	156	99.9	28.8	3.8	1.9	62.2	3.2
Earth science	17	100.0	11.8	-	-	88.2	-
Physics	17	100.0	52.9	-	-	41.2	5.9
Other physical sciences	27	100.0	14.8	-	3.7	81.5	-
Mathematics	234	99.9	26.9	3.4	3.4	63.2	3.0
Engineering	45	100.0	11.1	2.2	-	86.7	-
Social Science	1417	100.0	18.4	1.0	2.5	74.7	3.4
Economics	83	99.9	7.2	3.6	-	86.7	2.4
History	320	100.0	19.1	0.9	3.4	72.5	4.1
Political science	138	100.0	16.7	0.7	3.6	76.1	2.9
Psychology	274	100.1	23.4	1.1	1.5	70.8	3.3
Sociology and anthropology	307	100.1	19.9	1.0	2.3	73.6	3.3
Other social sciences	295	100.0	15.6	0.3	3.1	77.6	3.4
Humanities and Arts	2014	100.0	15.5	1.4	2.6	77.9	2.6
English and journalism	1001	100.0	14.7	2.1	2.2	78.2	2.8
Fine arts	631	100.1	13.3	0.5	2.9	80.7	2.7
Foreign language	243	99.9	23.9	1.6	3.3	69.5	1.6
Philosophy	31	100.0	16.1	3.2	6.5	74.2	-
Religion	108	100.1	16.7	-	1.9	78.7	2.8
Health	676	100.0	13.9	1.0	0.9	82.4	1.8
Nursing	470	100.0	18.5	1.1	0.6	78.3	1.5
Other	206	100.0	3.4	1.0	1.5	91.7	2.4
Home economics	574	99.9	8.2	1.7	1.7	85.5	2.8
Business and commerce	478	100.0	3.8	0.2	0.4	92.9	2.7
Education	3239	99.9	7.4	0.6	1.3	85.6	5.0
Other	44	100.0	18.2	2.3	-	72.7	6.8

APPENDIX TABLE A10

DO YOU EXPECT TO BEGIN WORK ON ONE OR MORE GRADUATE DEGREES SOMETIME IN THE FUTURE?

Undergraduate Major Field	Total Men		Per Cent Men			Total Women		Per Cent Women		
	N	%	No	Yes	NA	N	%	No	Yes	NA
Total	16293	100.0	64.2	30.2	5.6	9290	99.9	60.7	33.1	6.1
Natural Science	2607	100.0	65.8	28.0	6.2	803	100.0	65.6	28.9	5.5
Biological science	689	99.9	64.4	28.4	7.1	322	100.0	66.8	27.3	5.9
Premedicine	305	100.0	78.7	15.1	6.2	30	99.9	63.3	33.3	3.3
Chemistry	562	100.1	71.4	22.8	5.9	156	100.0	75.0	20.5	4.5
Earth science	245	100.0	72.2	23.7	4.1	17	100.0	41.2	58.8	-
Physics	252	100.0	57.9	36.1	6.0	17	100.0	41.2	35.3	23.5
Other physical sciences	103	100.1	58.3	36.9	4.9	27	100.0	63.0	37.0	-
Mathematics	451	100.1	54.8	38.6	6.7	234	100.0	62.0	32.9	5.1
Engineering	3127	99.8	67.3	28.5	4.0	45	100.0	60.0	35.6	4.4
Chemical	257	100.0	71.6	24.9	3.5	-	-	-	-	-
Civil	429	100.0	71.6	24.7	3.7	-	-	-	-	-
Electrical	827	100.0	63.5	33.4	3.1	-	-	-	-	-
Industrial	342	99.9	67.5	26.0	6.4	-	-	-	-	-
Mechanical	834	100.0	65.5	30.2	4.3	-	-	-	-	-
Mining	136	100.0	72.8	23.5	3.7	-	-	-	-	-
Other	302	100.0	70.9	25.8	3.3	-	-	-	-	-
Social Science	3070	99.9	62.2	31.5	6.2	1417	99.9	60.6	32.5	6.8
Economics	677	100.0	72.2	22.6	5.2	83	100.0	65.1	30.1	4.8
History	736	100.0	58.3	35.5	6.2	320	99.9	60.3	30.9	8.7
Political science	435	100.1	62.1	30.6	7.4	138	99.9	59.4	36.2	4.3
Psychology	395	100.0	63.0	32.2	4.8	274	100.1	61.7	30.7	7.7
Sociology and anthropology	263	100.0	60.1	33.8	6.1	307	100.0	62.2	33.2	4.6
Other social sciences	564	100.0	55.9	36.3	7.8	295	99.9	57.6	34.2	8.1

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Undergraduate Major Field	Total Men		Per Cent Men			Total Women		Per Cent Women		
	N	%	No	Yes	NA	N	%	No	Yes	NA
Humanities and Arts	1743	100.0	55.7	36.6	7.7	2014	100.1	57.0	36.8	6.3
English and journalism	734	100.1	59.7	30.7	9.7	1001	100.0	52.7	41.6	5.7
Fine arts	505	100.0	55.0	40.2	4.8	631	100.0	60.7	33.1	6.2
Foreign language	135	100.0	53.3	36.3	10.4	243	100.0	59.7	33.3	7.0
Philosophy	219	99.9	51.1	41.5	7.3	31	100.0	61.3	25.8	12.9
Religion	150	100.1	46.7	46.7	6.7	108	100.0	66.7	25.0	8.3
Health	302	100.1	81.5	12.3	6.3	676	99.9	71.3	25.3	3.3
Pharmacy	258	100.0	85.3	9.3	5.4	-	-	-	-	-
Other	44	100.0	59.1	29.5	11.4	206	100.1	77.7	20.9	1.5
Nursing	-	-	-	-	-	470	99.9	68.5	27.4	4.0
Agriculture	456	100.0	69.7	24.6	5.7	-	-	-	-	-
Home economics	-	-	-	-	-	574	100.0	65.7	27.5	6.8
Business and commerce	3287	100.0	74.1	23.2	2.7	478	100.0	70.7	25.3	4.0
Education	1612	100.0	44.2	45.8	10.0	3239	100.0	57.4	35.8	6.8
General	88	100.0	56.8	36.4	6.8	44	100.0	59.1	34.1	6.8